

LIST OF FIGURES

Figure 1. The stony corals *Acropora cervicornis* and *A. palmata* were surveyed for presence-absence, colony density, size, and condition at 235 sites from southwest of Key West to Fowey Rocks, northern Biscayne National Park, during June-August 2007.

Figure 2. Survey locations for *Acropora* corals, stony coral species richness, urchins, and *Coralliophila* snails from southwest of Key West to northern Biscayne National Park during June-August 2007.

Figure 3. Patch reef and shallow low-relief habitats surveyed for *Acropora* spp., stony coral species richness, urchins, and *Coralliophila* snails in the Florida Keys National Marine Sanctuary and Biscayne National Park during June-August 2007.

Figure 4. Offshore coral reef and hard-bottom habitats surveyed for *Acropora* spp., stony coral species richness, urchins, and *Coralliophila* snails in the Florida Keys National Marine Sanctuary and Biscayne National Park during June-August 2007.

Figure 5. *Acropora cervicornis* in hard-bottom and coral reef habitats in the Florida Keys National Marine Sanctuary and Biscayne National Park observed during June-August 2007.

Figure 6. Staghorn coral (*Acropora cervicornis*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from the Fowey Rocks to Ajax Reef, Biscayne National Park, surveyed during June-August 2007.

Figure 7. Staghorn coral (*Acropora cervicornis*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Pacific Reef, Biscayne National Park, to Carysfort/South Carysfort Reef SPA surveyed during June-August 2007.

Figure 8. Staghorn coral (*Acropora cervicornis*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Elbow Reef SPA to Molasses Reef SPA surveyed during June-August 2007.

Figure 9. Staghorn coral (*Acropora cervicornis*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Conch Reef SPA to Alligator Reef SPA surveyed during June-August 2007.

Figure 10. Staghorn coral (*Acropora cervicornis*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Tennessee Reef RO to Coffins Patch SPA surveyed during June-August 2007.

Figure 11. Staghorn coral (*Acropora cervicornis*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys within and near Sombrero Key SPA surveyed during June-August 2007.

Figure 12. Staghorn coral (*Acropora cervicornis*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Big Pine Shoal to Looe Key SPA surveyed during June-August 2007.

Figure 13. Staghorn coral (*Acropora cervicornis*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Maryland Shoal to Western Sambo Ecological Reserve surveyed during June-August 2007.

Figure 14. Staghorn coral (*Acropora cervicornis*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Eastern Dry Rocks SPA to Satan Shoal surveyed during June-August 2007.

Figure 15. *Acropora palmata* in hard-bottom and coral reef habitats in Biscayne National Park and the Florida Keys National Marine Sanctuary observed during June-August 2007.

Figure 16. Elkhorn coral (*Acropora palmata*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from the Fowey Rocks to Ajax Reef, Biscayne National Park, surveyed during June-August 2007.

Figure 17. Elkhorn coral (*Acropora palmata*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Pacific Reef, Biscayne National Park, to Carysfort/South Carysfort Reef SPA surveyed during June-August 2007.

Figure 18. Elkhorn coral (*Acropora palmata*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Elbow Reef SPA to Molasses Reef SPA surveyed during June-August 2007.

Figure 19. Elkhorn coral (*Acropora palmata*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Conch Reef SPA to Alligator Reef SPA surveyed during June-August 2007.

Figure 20. Elkhorn coral (*Acropora palmata*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Tennessee Reef RO to Coffins Patch SPA surveyed during June-August 2007.

Figure 21. Elkhorn coral (*Acropora palmata*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys within and near Sombrero Key SPA surveyed during June-August 2007.

Figure 22. Elkhorn coral (*Acropora palmata*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Big Pine Shoal to Looe Key SPA surveyed during June-August 2007.

Figure 23. Elkhorn coral (*Acropora palmata*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Maryland Shoal to Western Sambo Ecological Reserve surveyed during June-August 2007.

Figure 24. Elkhorn coral (*Acropora palmata*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Eastern Dry Rocks SPA to Satan Shoal surveyed during June-August 2007.

Figure 25. Impacts to staghorn (*Acropora cervicornis*) and elkhorn (*A. palmata*) coral documented during June-August 2007 in Biscayne National Park and the Florida Keys National Marine Sanctuary.

Figure 26. *Coralliophila* and other gastropod mollusks surveyed for density, size, and substratum occupancy in the Florida Keys National Marine Sanctuary and Biscayne National Park during June-August 2007.

Figure 27. Total shell length distribution of *Coralliophila* sp. and other gastropod mollusks in the Florida Keys National Marine Sanctuary and Biscayne National Park measuring during June-August 2007 at 235 hard-bottom and coral reef sites.

Figure 28. Urchin species surveyed for density and test diameter in the Florida Keys National Marine Sanctuary and Biscayne National Park during June-August 2007. Not shown are *Echinometra lucunter* (rock boring urchin), *Lytechinus variegatus*, and *Tripneustes ventricosus*.

Figure 29. Size distribution of the urchins *Diadema antillarum*, *Echinometra viridis*, and *Eucidaris tribuloides* in the Florida Keys National Marine Sanctuary and Biscayne National Park measuring during June-August 2007 at 235 hard-bottom and coral reef sites.

Figure 1. The stony corals *Acropora cervicornis* and *A. palmata* were surveyed for presence-absence, colony density, size, and condition at 235 sites from southwest of Key West to Fowey Rocks, northern Biscayne National Park, during June-August 2007.

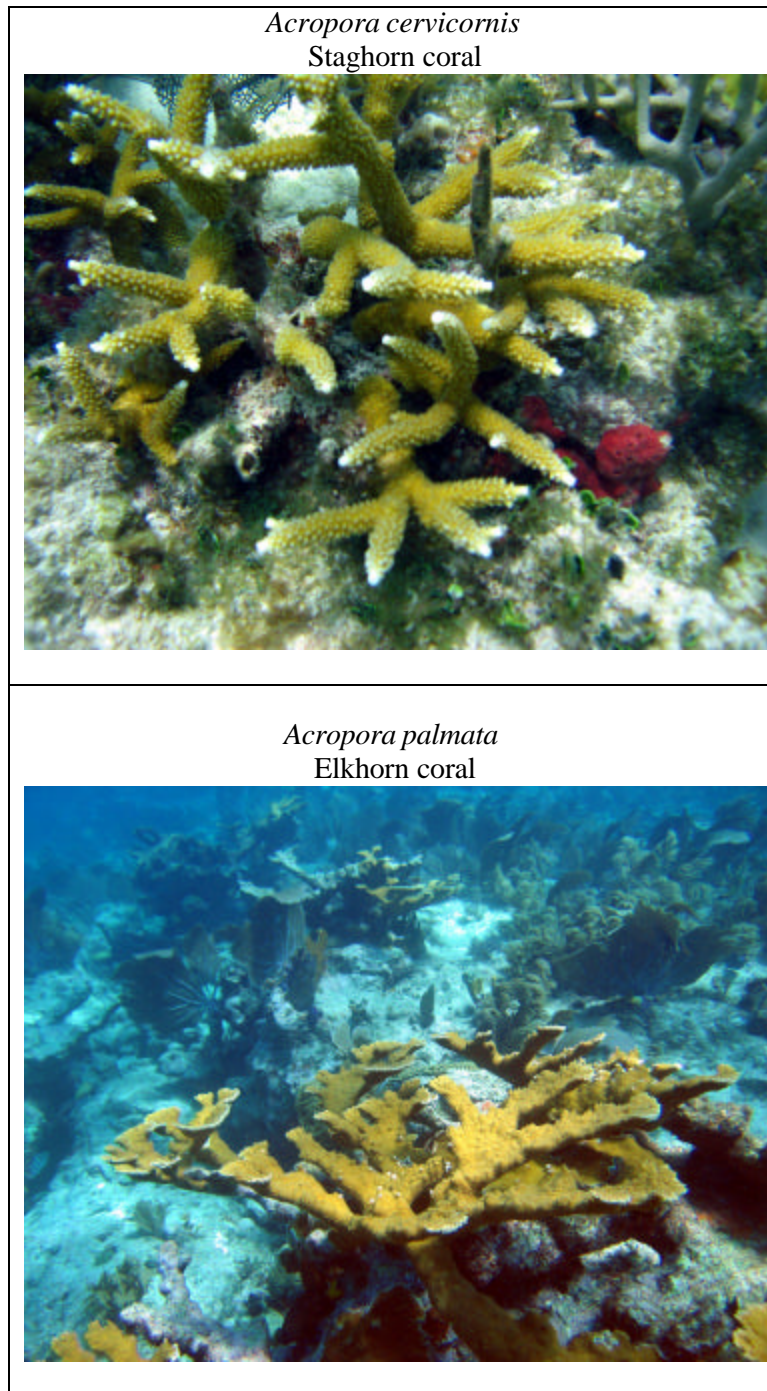


Figure 2. Survey locations for *Acropora* corals, stony coral species richness, urchins, and *Coralliophila* snails from southwest of Key West to northern Biscayne National Park during June-August 2007.

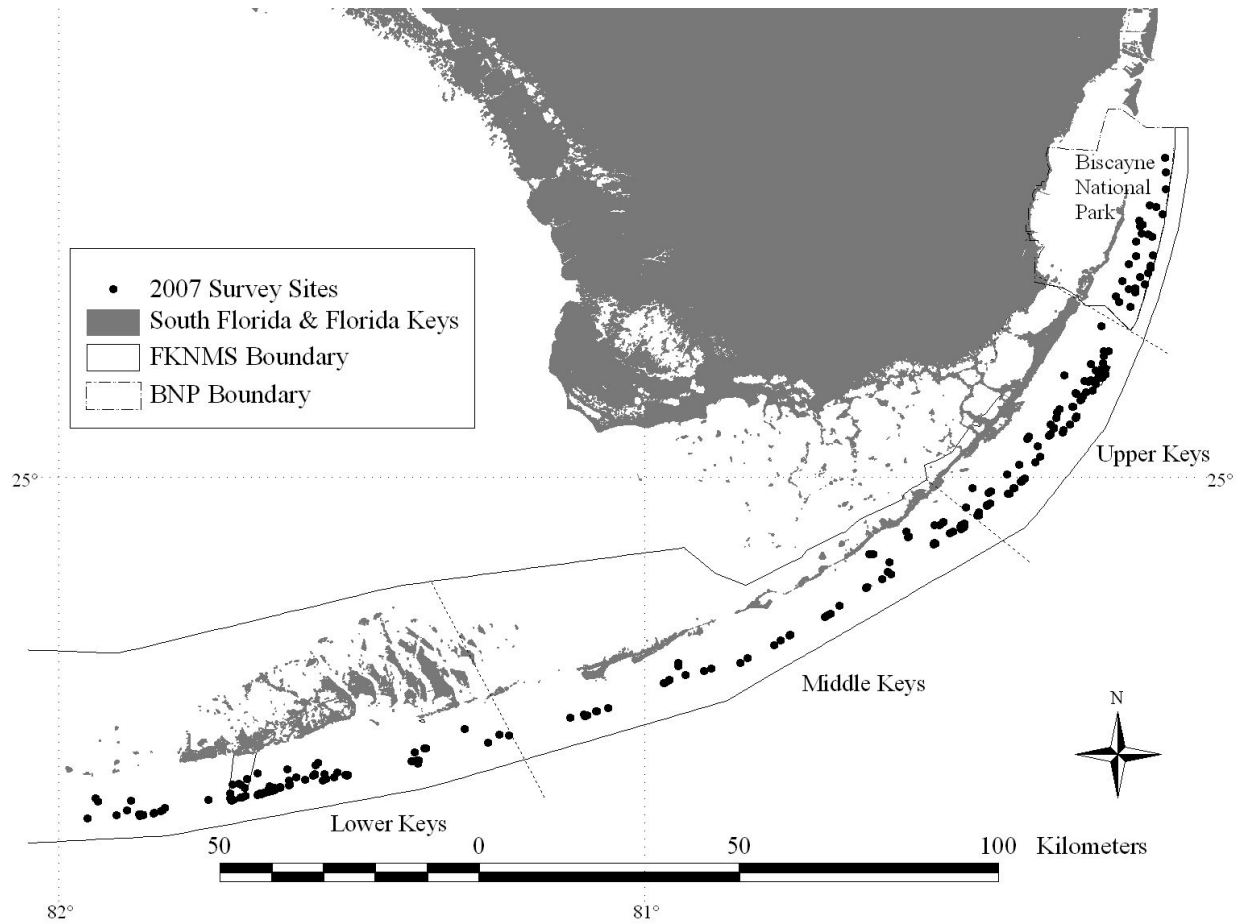
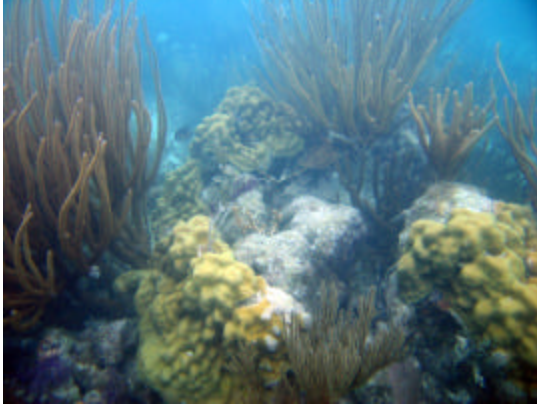


Figure 3. Patch reef and shallow low-relief habitats surveyed for *Acropora* spp., stony coral species richness, urchins, and *Coralliophila* snails in the Florida Keys National Marine Sanctuary and Biscayne National Park during June-August 2007.

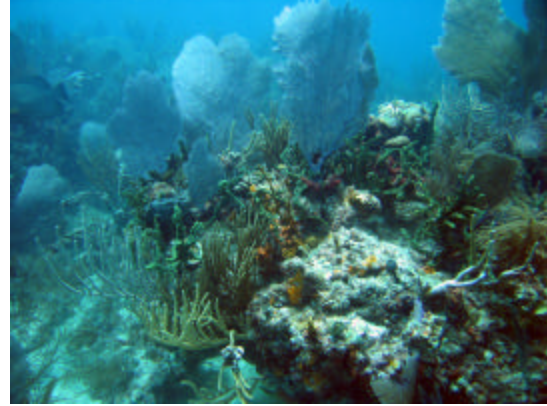
Mid-channel patch reef

Site #1, Inshore of Molasses Reef, 2.7-4.3 m
25° 01.109'N, 80° 26.336'W



Offshore patch reef

Site #132, Looe Key RO, 6.4-7.9 m
24° 34.051'N, 80° 23.251'W



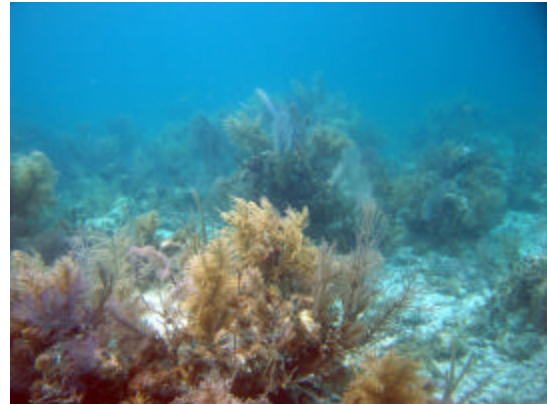
Mid-channel patch reef

Site #119, North of Pelican Shoal, 4.9-7.0 m
24° 31.923'N, 81° 37.551'W



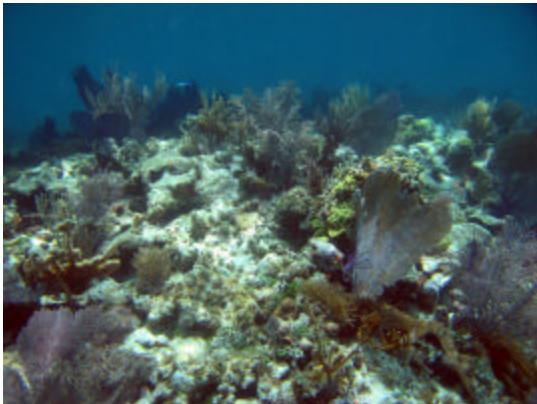
Hard-bottom/rubble/sand matrix

Site #36, West of Carysfort SPA, 4.6-5.8 m
25° 12.381'N, 80° 13.990'W



Offshore patch reef

Site #37, West of Carysfort SPA, 2.7-3.7 m
25° 13.355'N, 80° 13.474'W



Low-relief hard-bottom

Site #469, South of Ajax Reef, 3-4.3 m
25° 23.489'N, 80° 08.065'W



Figure 4. Offshore coral reef and hard-bottom habitats surveyed for *Acropora* spp., stony coral species richness, urchins, and *Coralliophila* snails in the Florida Keys National Marine Sanctuary and Biscayne National Park during June-August 2007.

Inner line reef tract spur and groove
Site #62, Key Largo Dry Rocks, 1.5-3.4 m
25° 07.436'N, 80° 17.851'W



Inner line reef tract spur and groove
Site #58, Horseshoe Reef, 2.1-4.0 m
25° 08.405'N, 80° 17.662'W



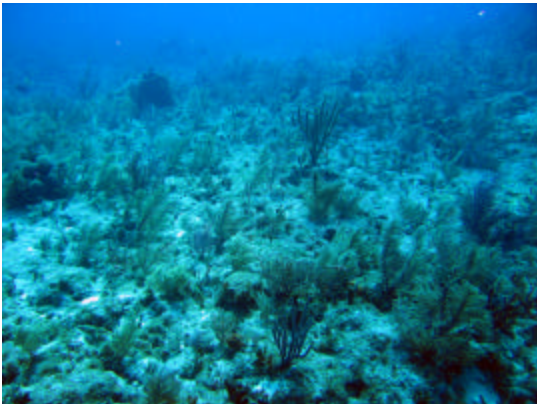
High-relief spur and groove
Site #155, Rock Key SPA, 1.5-3.7 m
24° 27.274'N, 81° 51.451'W



Patchy hard-bottom
Site #169, Sand Key SPA, 6.4-7.6 m
24° 27.229'N, 81° 52.895'W



Low-relief hard-bottom
Site #105, Conch Reef SPA, 10.1-11.3 m
24° 56.853'N, 80° 27.508'W



Low-relief spur and groove, 13.1-14.3 m
Site #106, Conch Reef RO,
24° 57.042'N, 80° 27.269'W

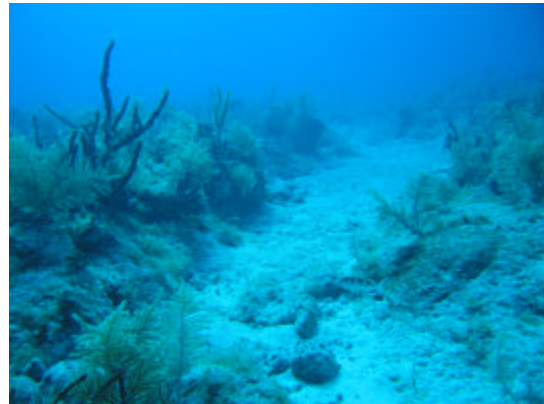


Figure 5. *Acropora cervicornis* in hard-bottom and coral reef habitats in the Florida Keys National Marine Sanctuary and Biscayne National Park observed during June-August 2007.

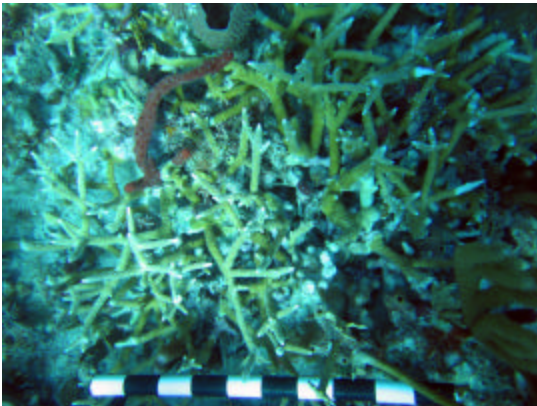
Mid-channel patch reef, 4.6-6.4 m
Site #406, Offshore of Broad Creek
25° 20.505'N, 80° 11.128'W



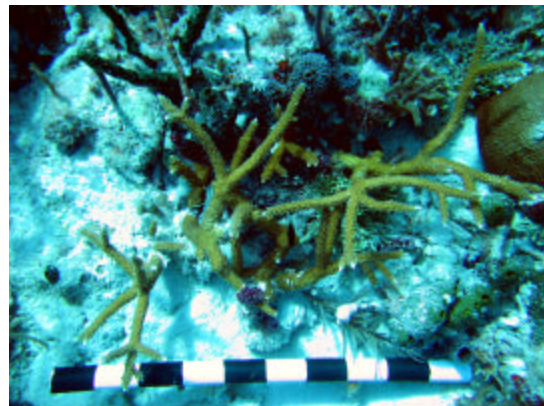
Mid-channel patch reef, 5.8-7.3 m
Site #124, Western Sambo ER
24° 30.350'N, 81° 42.380'W



Offshore patch reef, 6.4-7.0 m
Site #131, North of Looe Key SPA
24° 33.705'N, 81° 24.325'W



Offshore patch reef, 8.8-9.8 m
Site #130, Maryland Shoal
24° 31.396'N, 81° 33.686'W



Low-relief spur and groove, 8.2-10.1 m
Site #175, Eastern Sambo RO
24° 29.443'N, 81° 39.801'W



High-relief spur and groove, 3.0-5.5 m
Site #136, East of Eastern Dry Rocks
24° 27.849'N, 81° 50.291'W

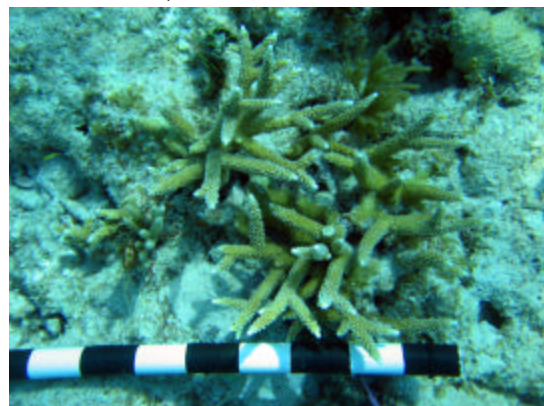


Figure 6. Staghorn coral (*Acropora cervicornis*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from the Fowey Rocks to Ajax Reef, Biscayne National Park, surveyed during June-August 2007.

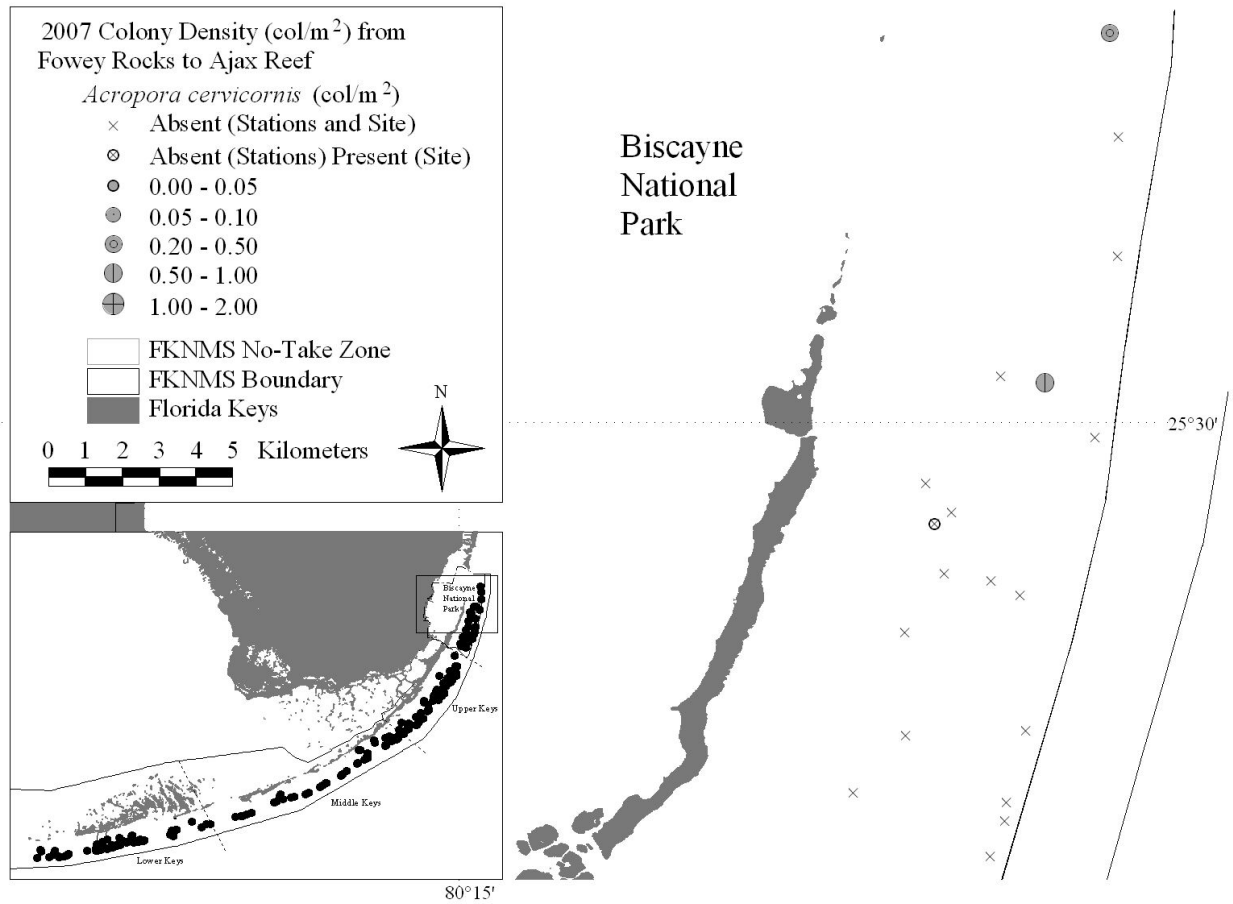


Figure 7. Staghorn coral (*Acropora cervicornis*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Pacific Reef, Biscayne National Park, to Carysfort/South Carysfort Reef SPA surveyed during June-August 2007.

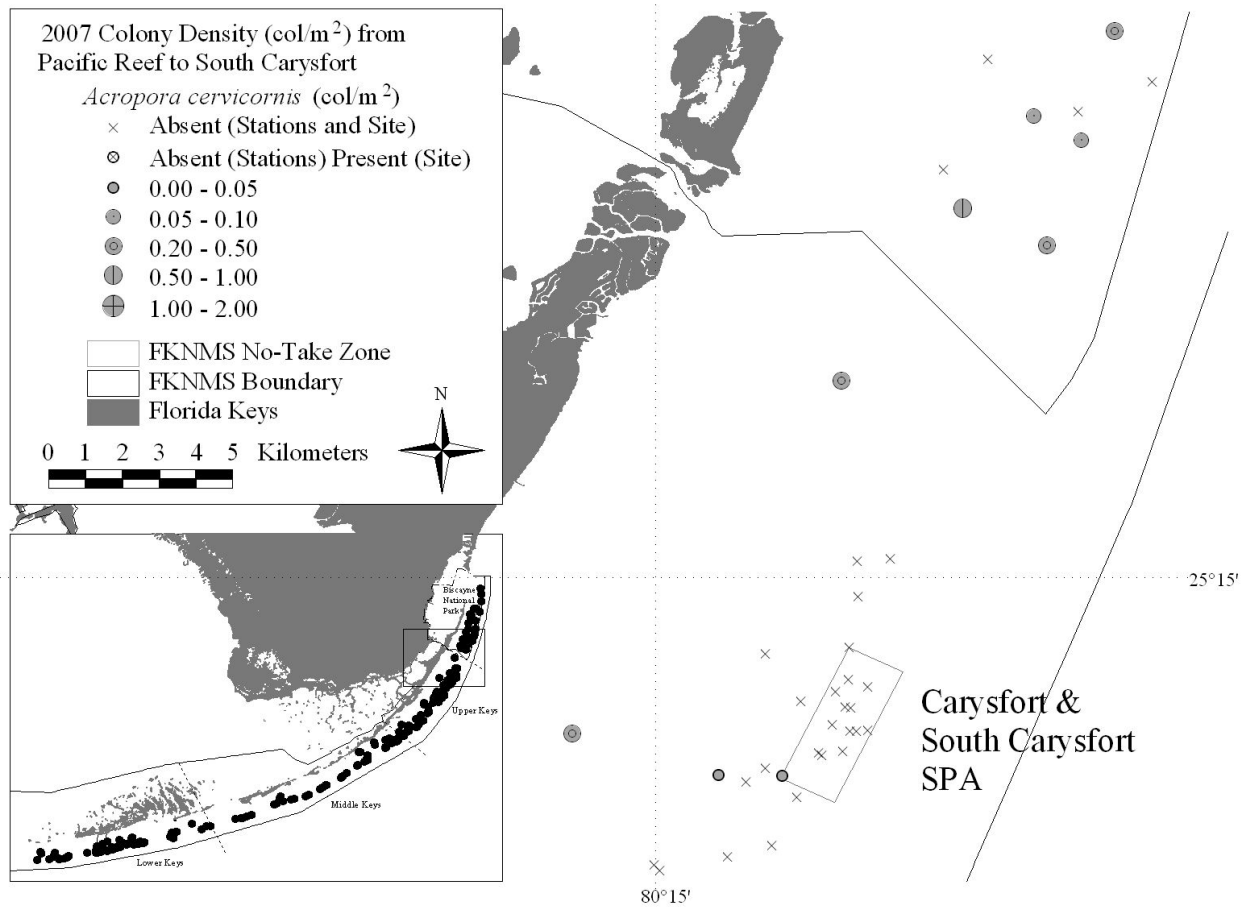


Figure 8. Staghorn coral (*Acropora cervicornis*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Elbow Reef SPA to Molasses Reef SPA surveyed during June-August 2007.

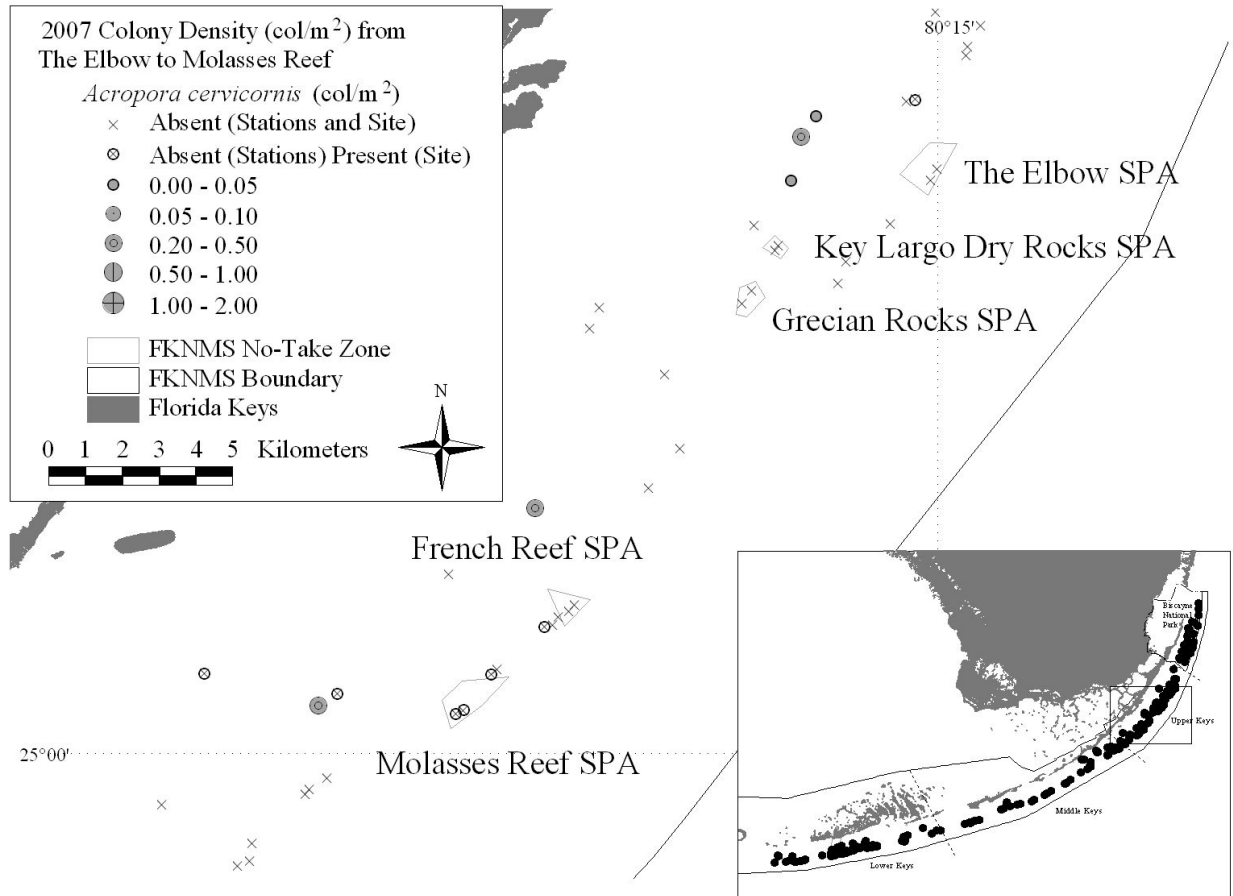


Figure 9. Staghorn coral (*Acropora cervicornis*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Conch Reef SPA to Alligator Reef SPA surveyed during June-August 2007.

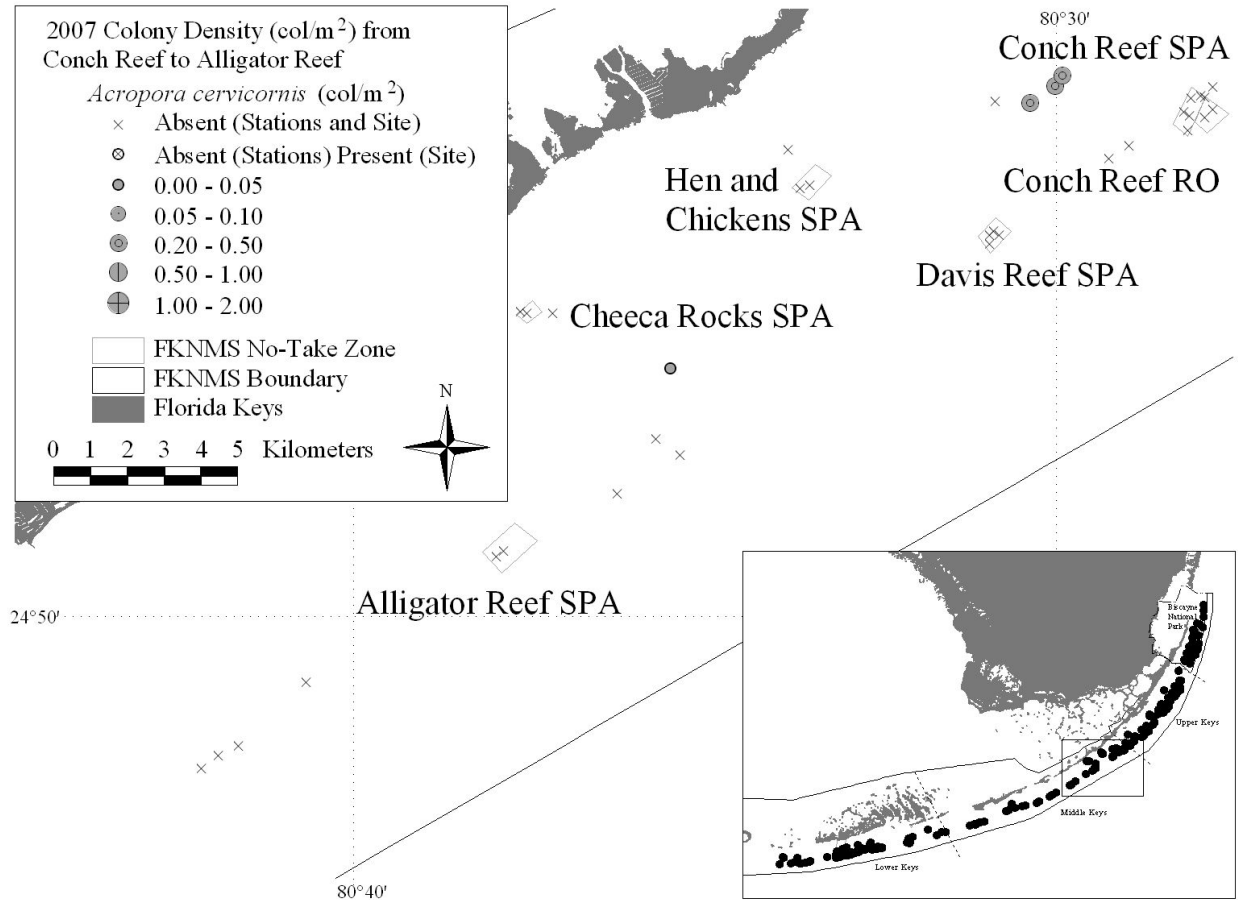


Figure 10. Staghorn coral (*Acropora cervicornis*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Tennessee Reef RO to Coffins Patch SPA surveyed during June-August 2007.

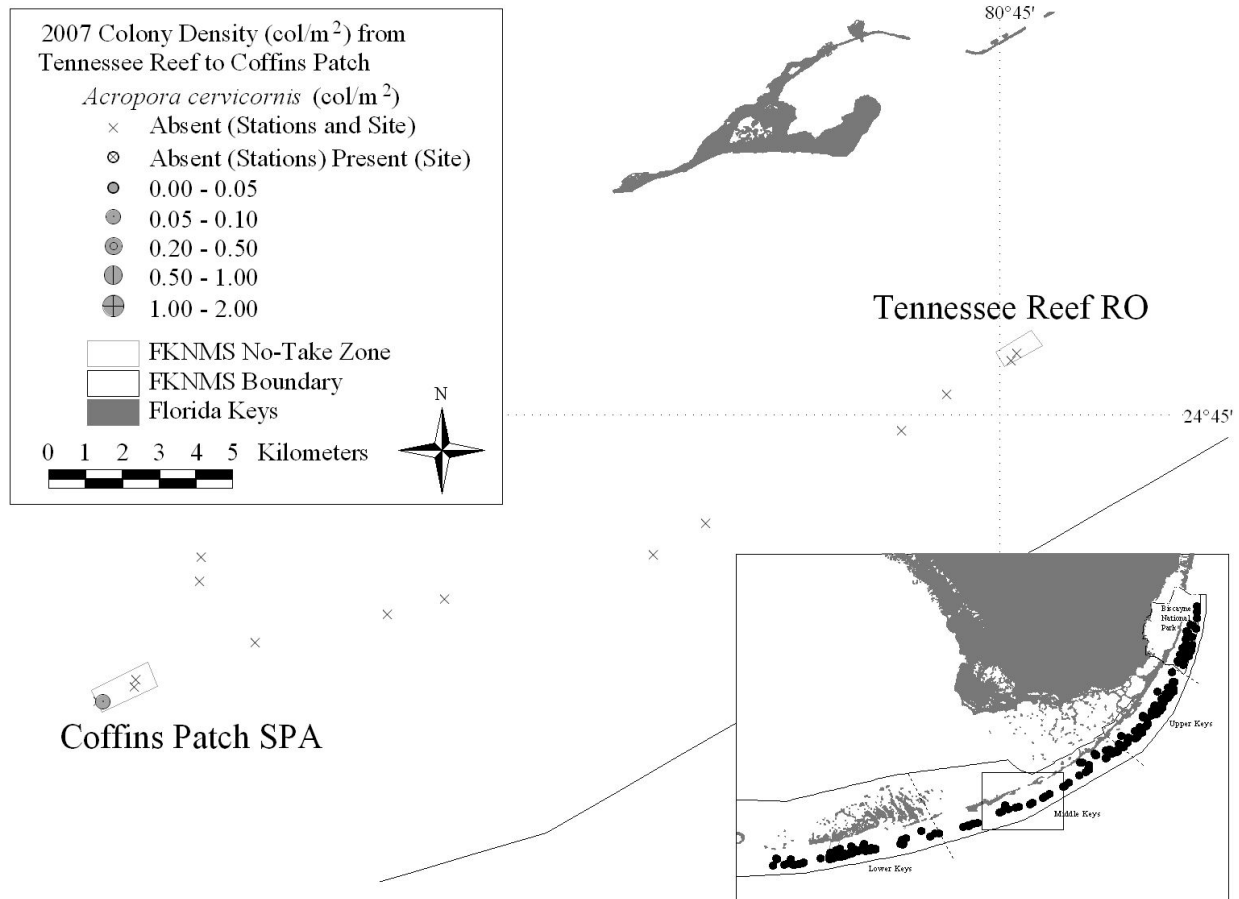


Figure 11. Staghorn coral (*Acropora cervicornis*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys within and near Sombrero Key SPA surveyed during June-August 2007.

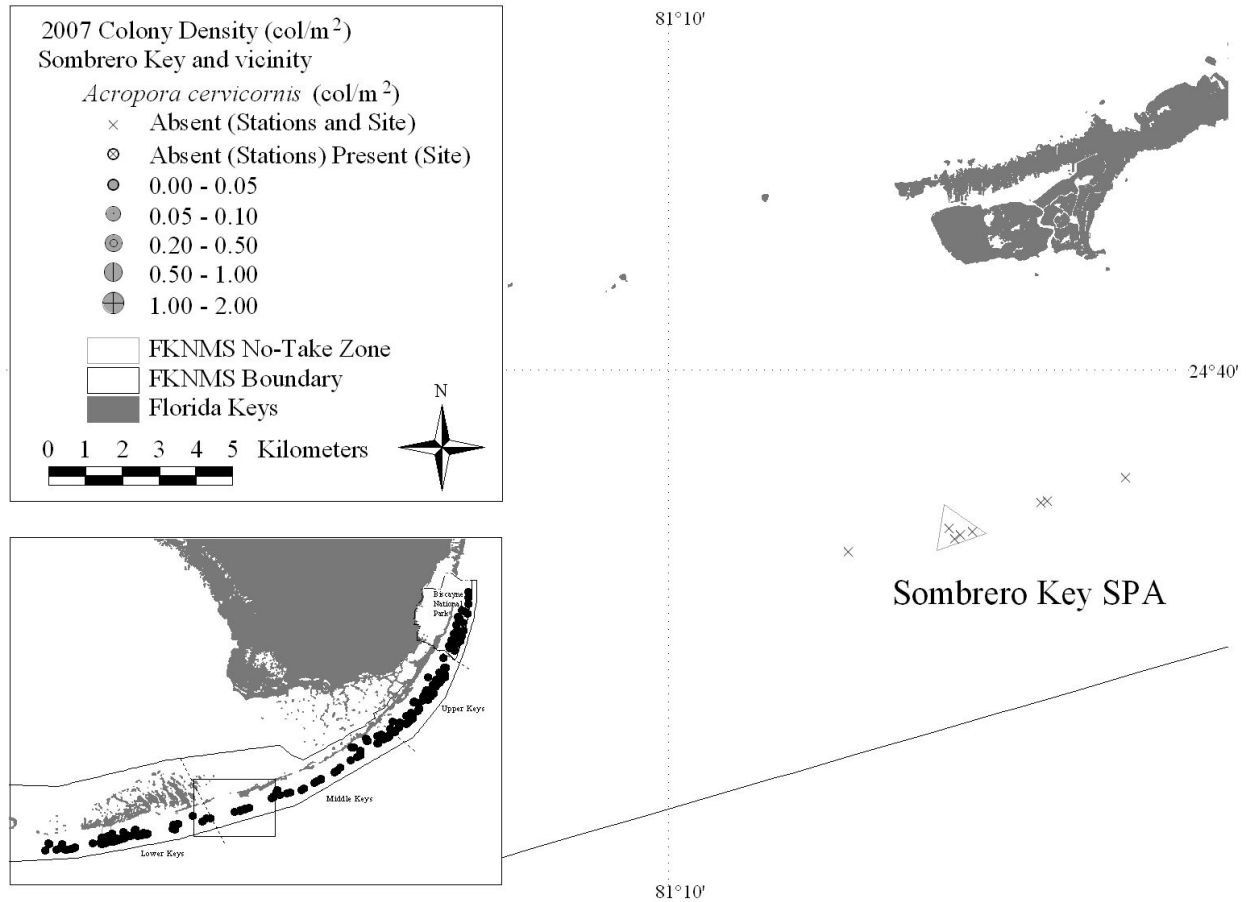


Figure 12. Staghorn coral (*Acropora cervicornis*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Big Pine Shoal to Looe Key SPA surveyed during June-August 2007.

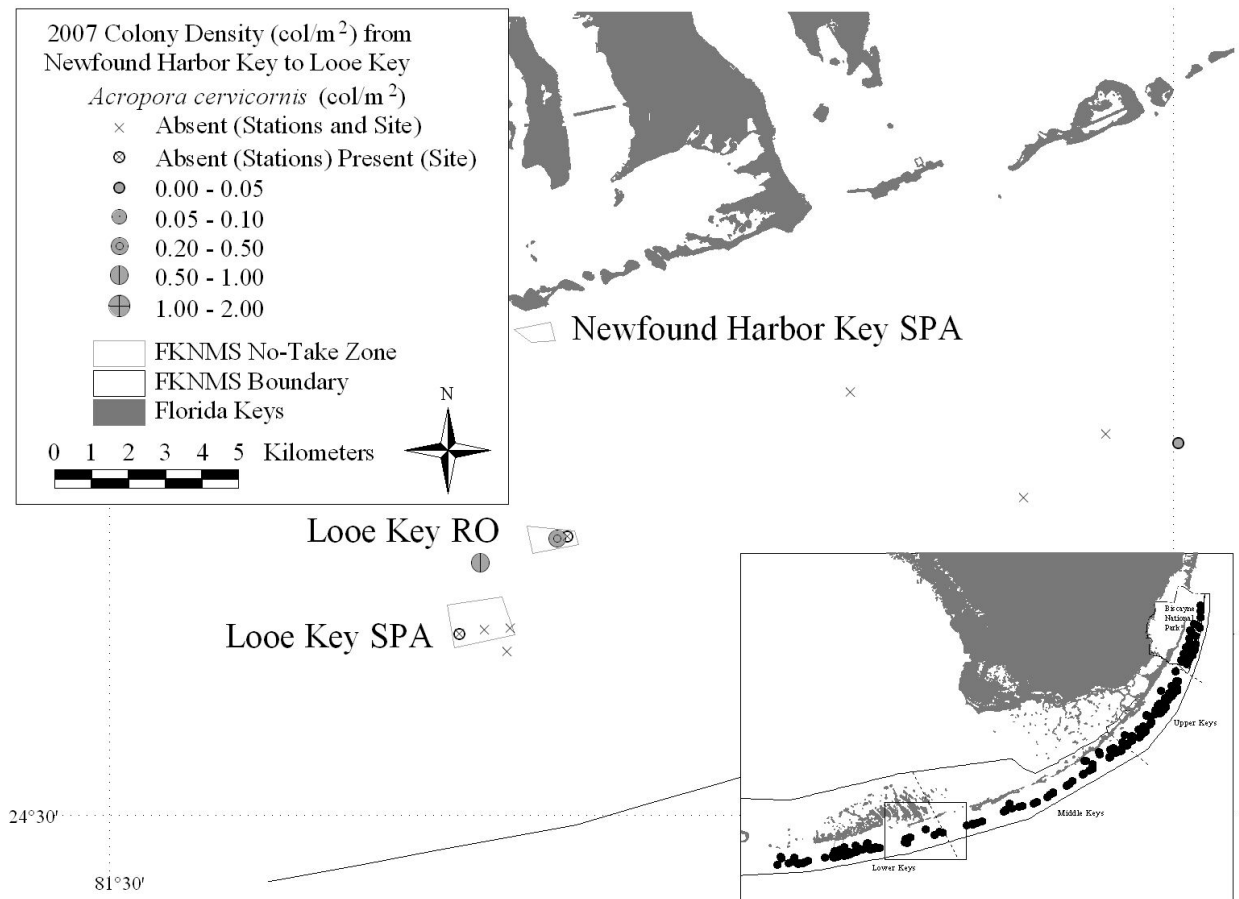


Figure 13. Staghorn coral (*Acropora cervicornis*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Maryland Shoal to Western Sambo Ecological Reserve surveyed during June-August 2007.

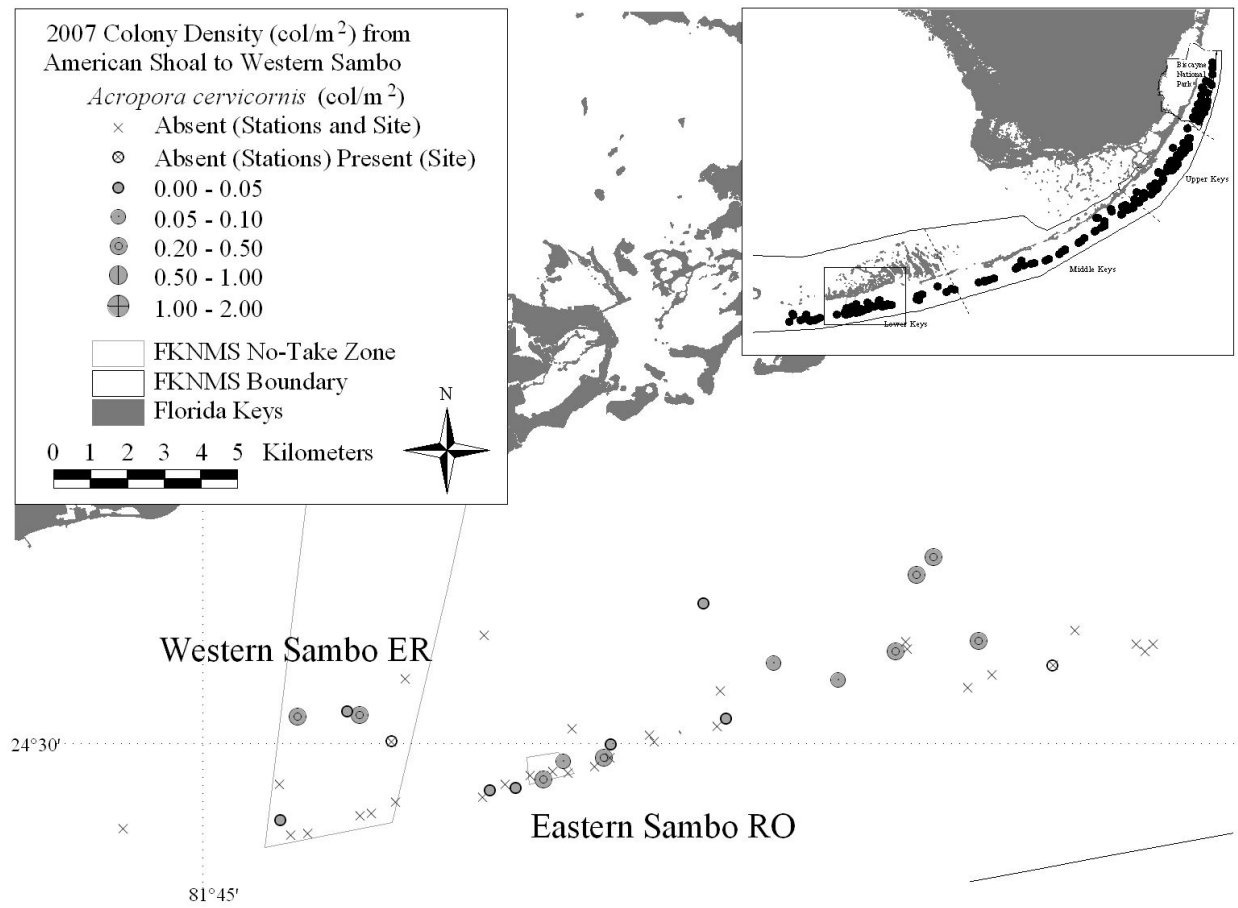


Figure 14. Staghorn coral (*Acropora cervicornis*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Eastern Dry Rocks SPA to Satan Shoal surveyed during June-August 2007.

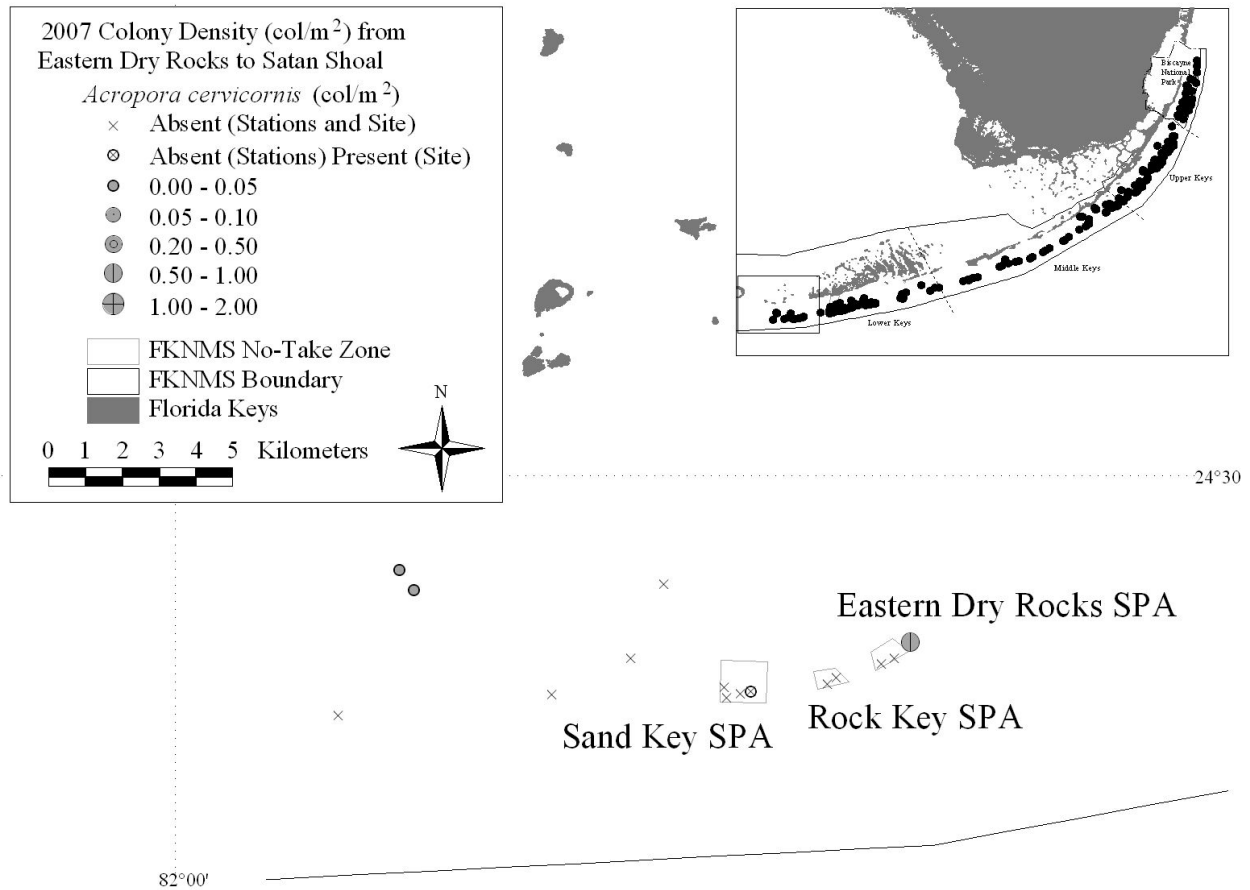


Figure 15. *Acropora palmata* in hard-bottom and coral reef habitats in Biscayne National Park and the Florida Keys National Marine Sanctuary observed during June-August 2007.

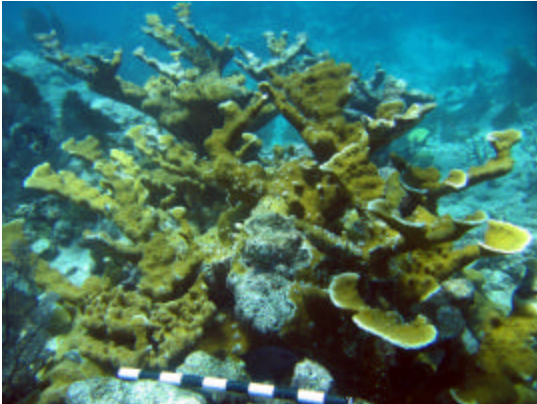
Inner line reef tract, 2.1-4.0 m
Site #28, Horseshoe Reef
25° 08.405'N, 80° 17.662'W



High-relief spur and groove, 1.2-2.7 m
Site #217, South Carysfort Reef
25° 12.569'N, 80° 13.172'W



High-relief spur and groove, 2.7-5.2 m
Site #28, Elbow Reef SPA
25° 08.562'N, 80° 15.499'W



High-relief spur and groove, 5.5-9.4 m
Site #29, French Reef SPA
25° 02.019'N, 80° 20.951'W



High-relief spur and groove, 3.4-6.1 m
Site #84, Sombrero Key SPA
24° 37.560'N, 81° 06.711'W



Inner line reef tract, 1.5-4.3 m
Site #148, Looe Key SPA
24° 32.770'N, 81° 24.276'W

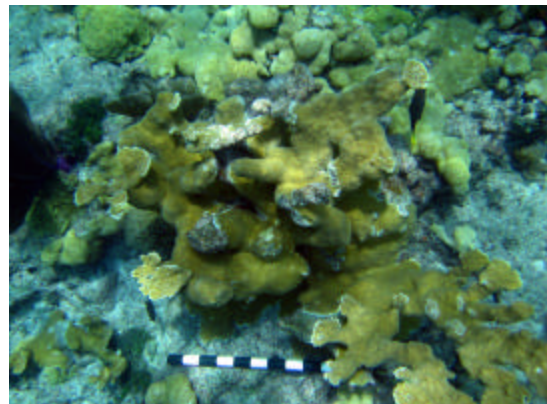


Figure 16. Elkhorn coral (*Acropora palmata*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from the Fowey Rocks to Ajax Reef, Biscayne National Park, surveyed during June-August 2007.

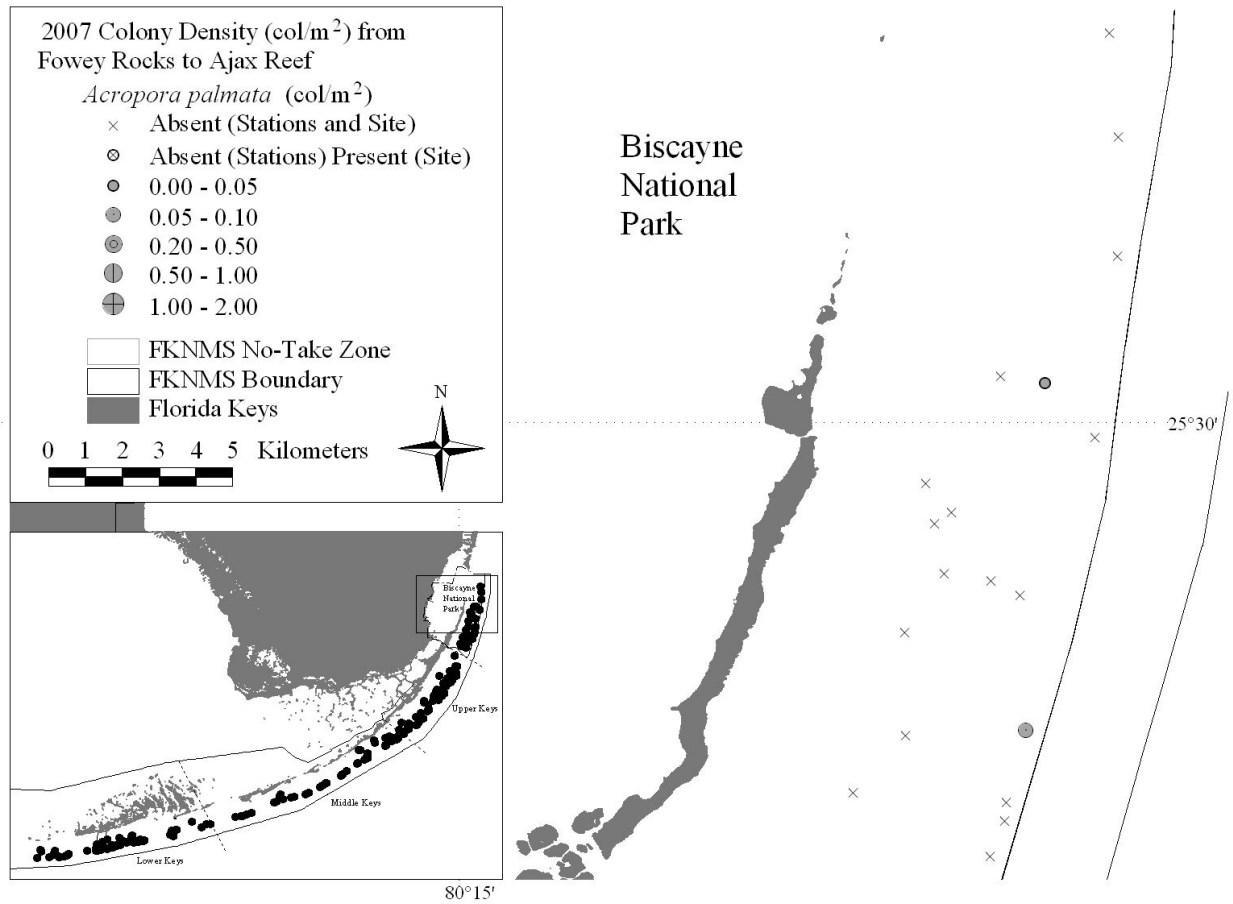


Figure 17. Elkhorn coral (*Acropora palmata*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Pacific Reef, Biscayne National Park, to Carysfort/South Carysfort Reef SPA surveyed during June-August 2007.

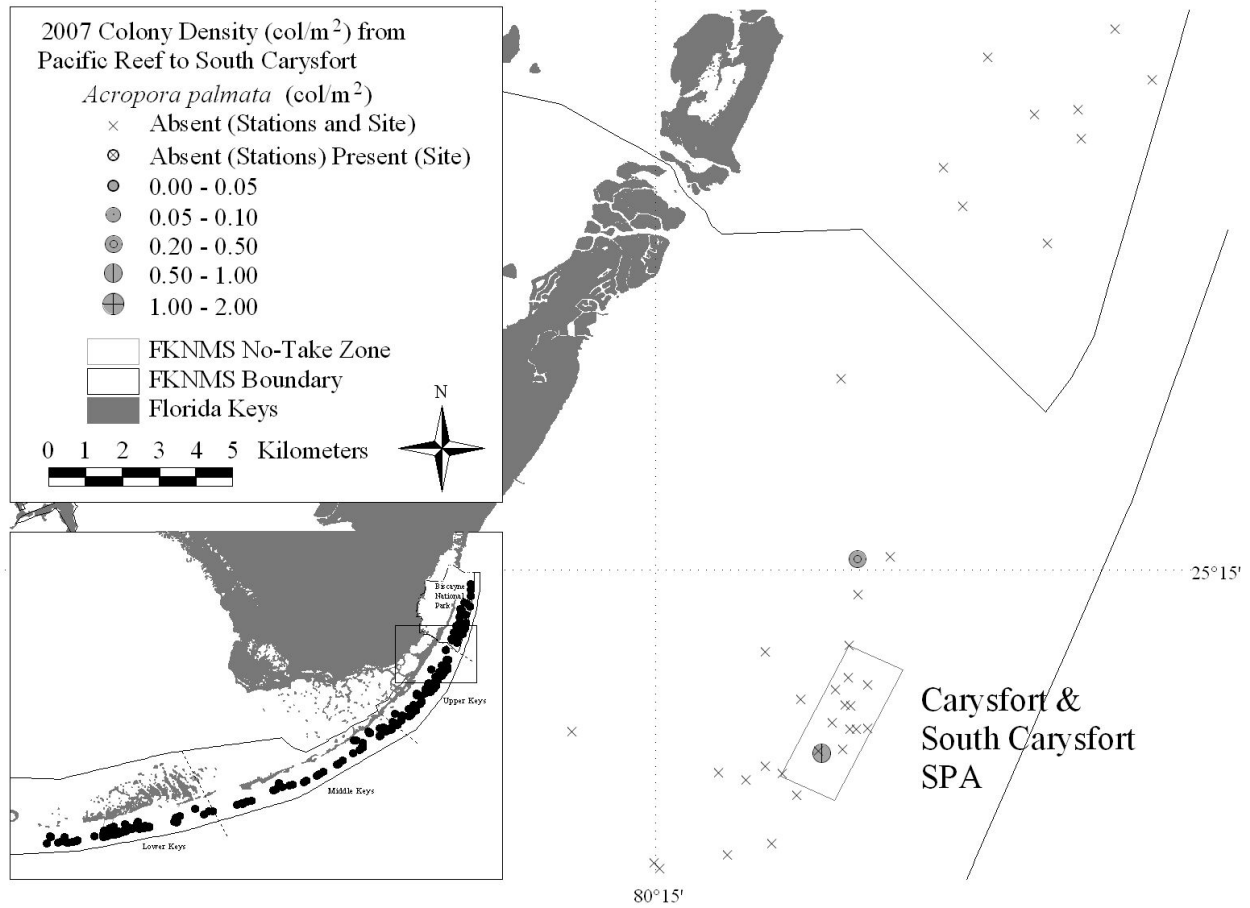


Figure 18. Elkhorn coral (*Acropora palmata*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Elbow Reef SPA to Molasses Reef SPA surveyed during June-August 2007.

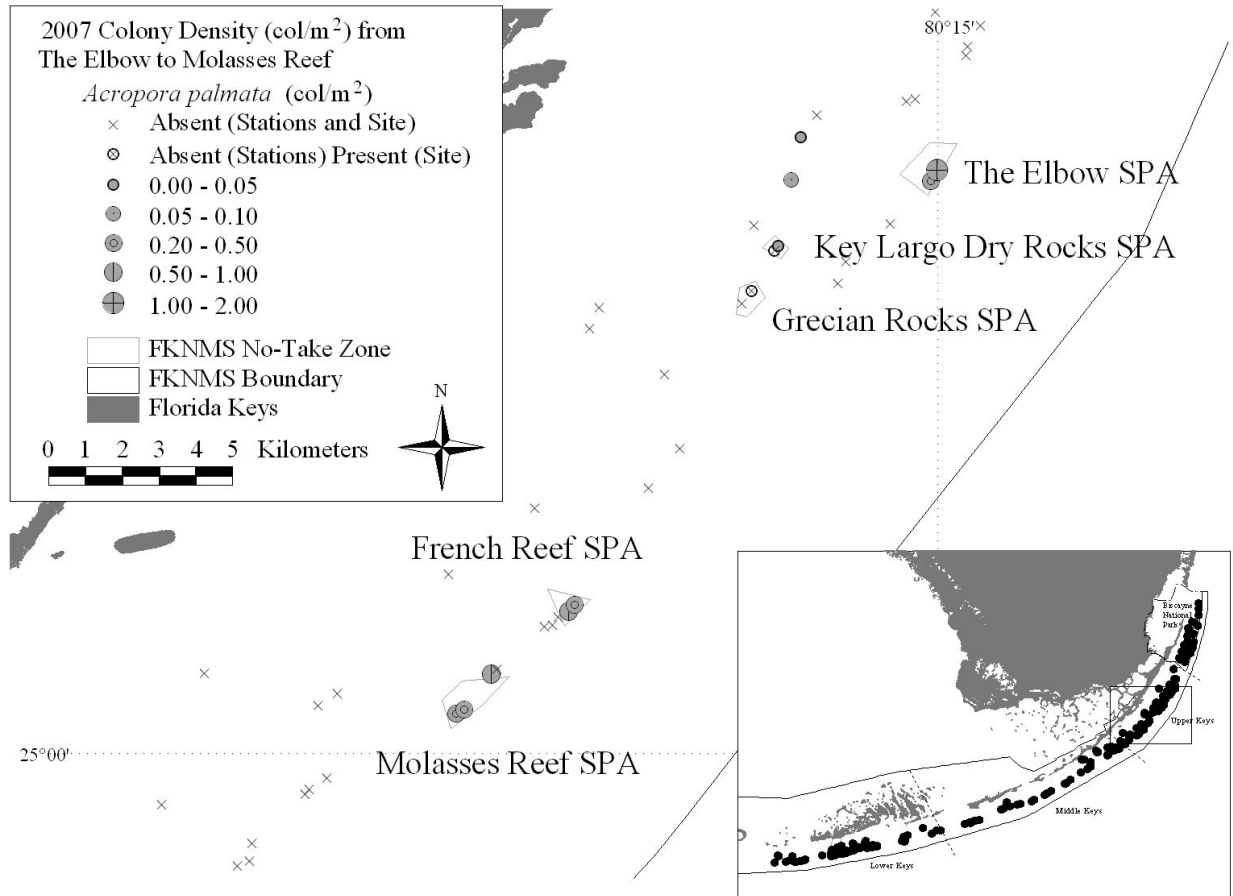


Figure 19. Elkhorn coral (*Acropora palmata*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Conch Reef SPA to Alligator Reef SPA surveyed during June-August 2007.

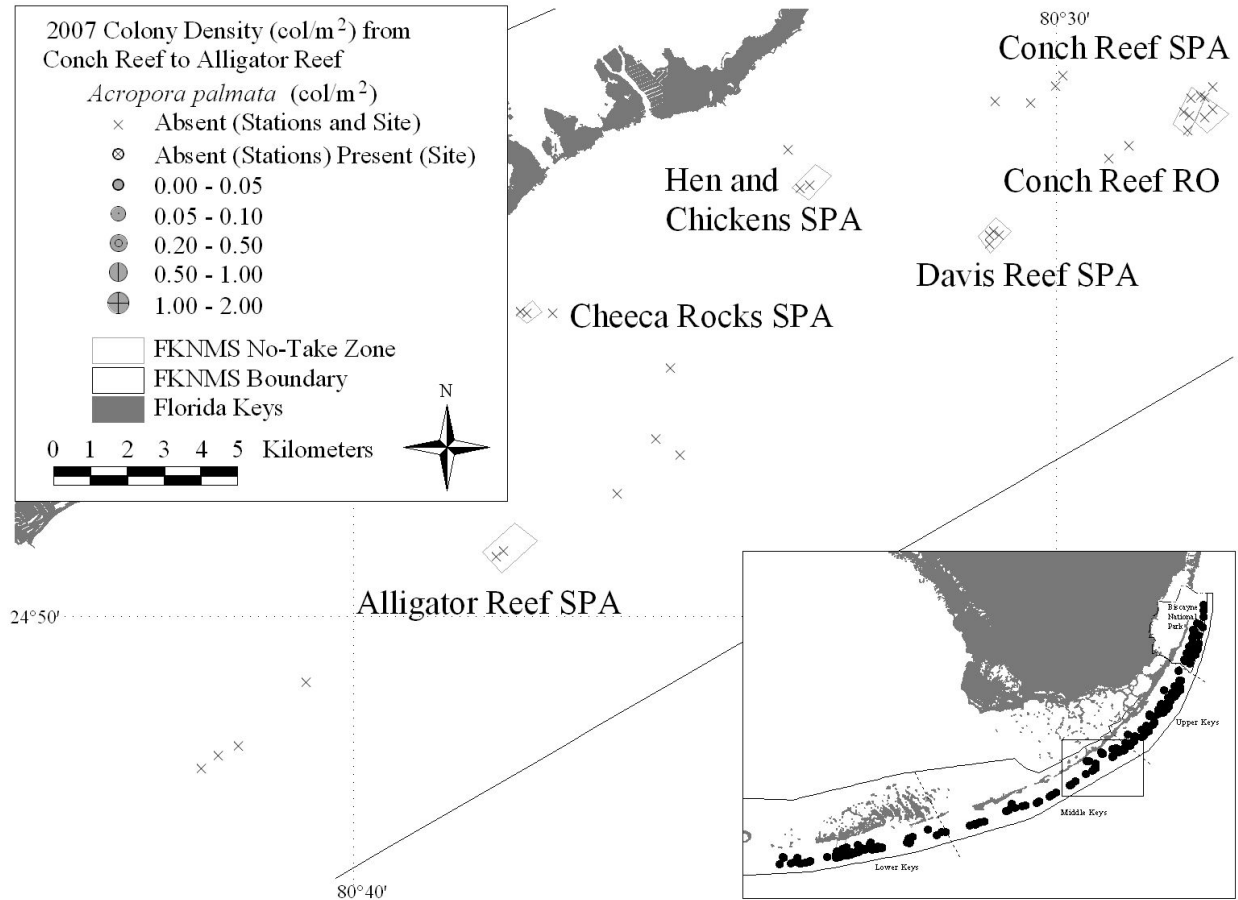


Figure 20. Elkhorn coral (*Acropora palmata*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Tennessee Reef RO to Coffins Patch SPA surveyed during June-August 2007.

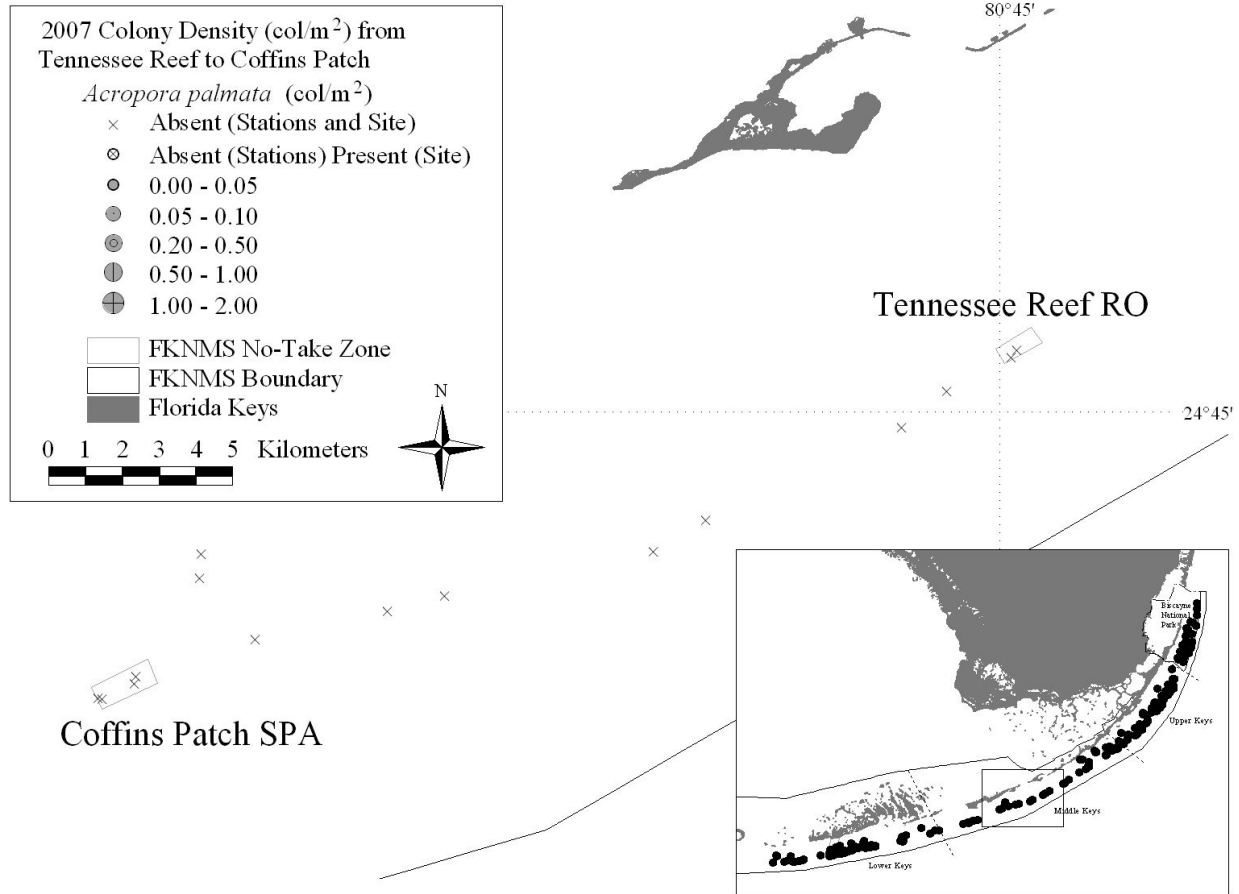


Figure 21. Elkhorn coral (*Acropora palmata*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys within and near Sombrero Key SPA surveyed during June-August 2007.

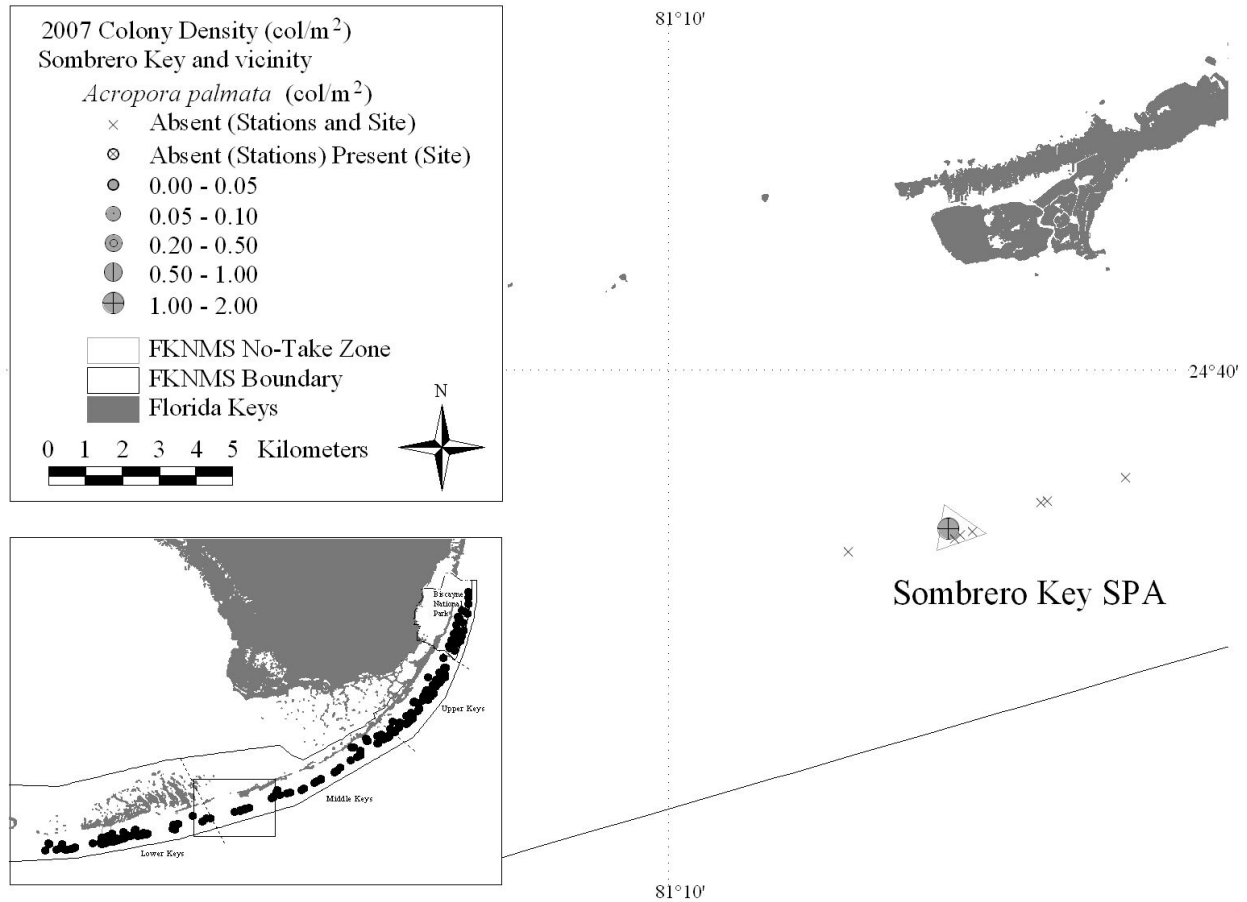


Figure 22. Elkhorn coral (*Acropora palmata*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Big Pine Shoal to Looe Key SPA surveyed during June-August 2007.

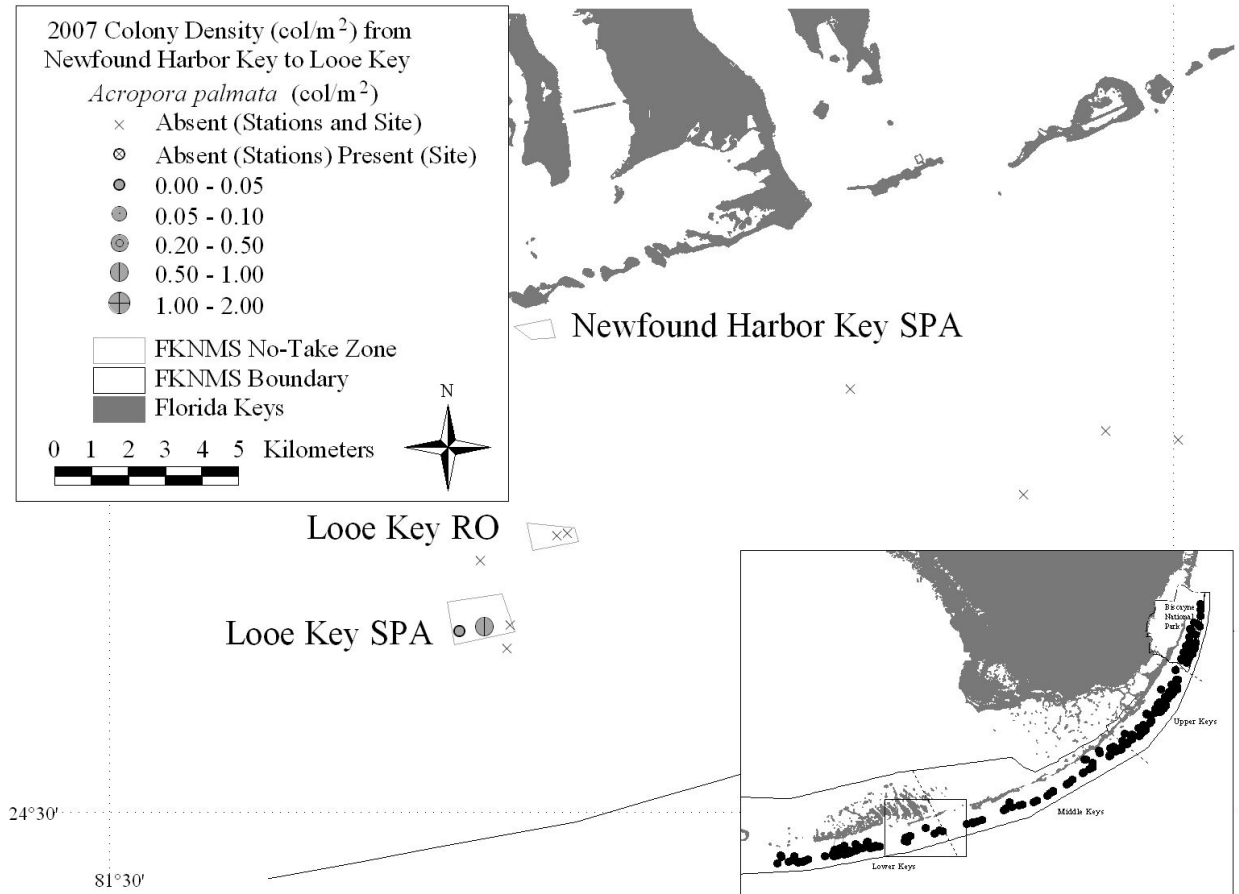


Figure 23. Elkhorn coral (*Acropora palmata*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Maryland Shoal to Western Sambo Ecological Reserve surveyed during June-August 2007.

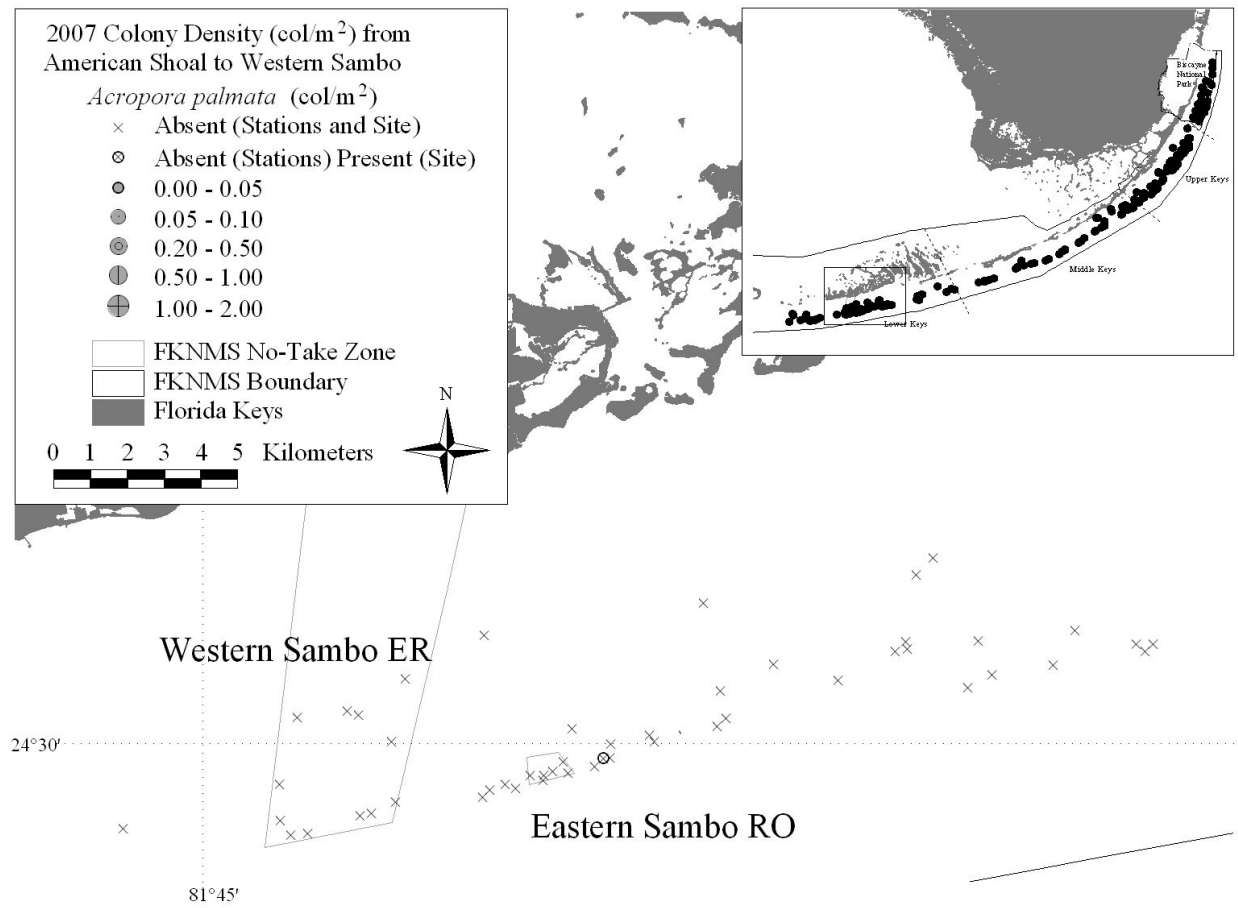


Figure 24. Elkhorn coral (*Acropora palmata*) presence-absence and colony density (no. of colonies/m²) in the Florida Keys from Eastern Dry Rocks SPA to Satan Shoal surveyed during June-August 2007.

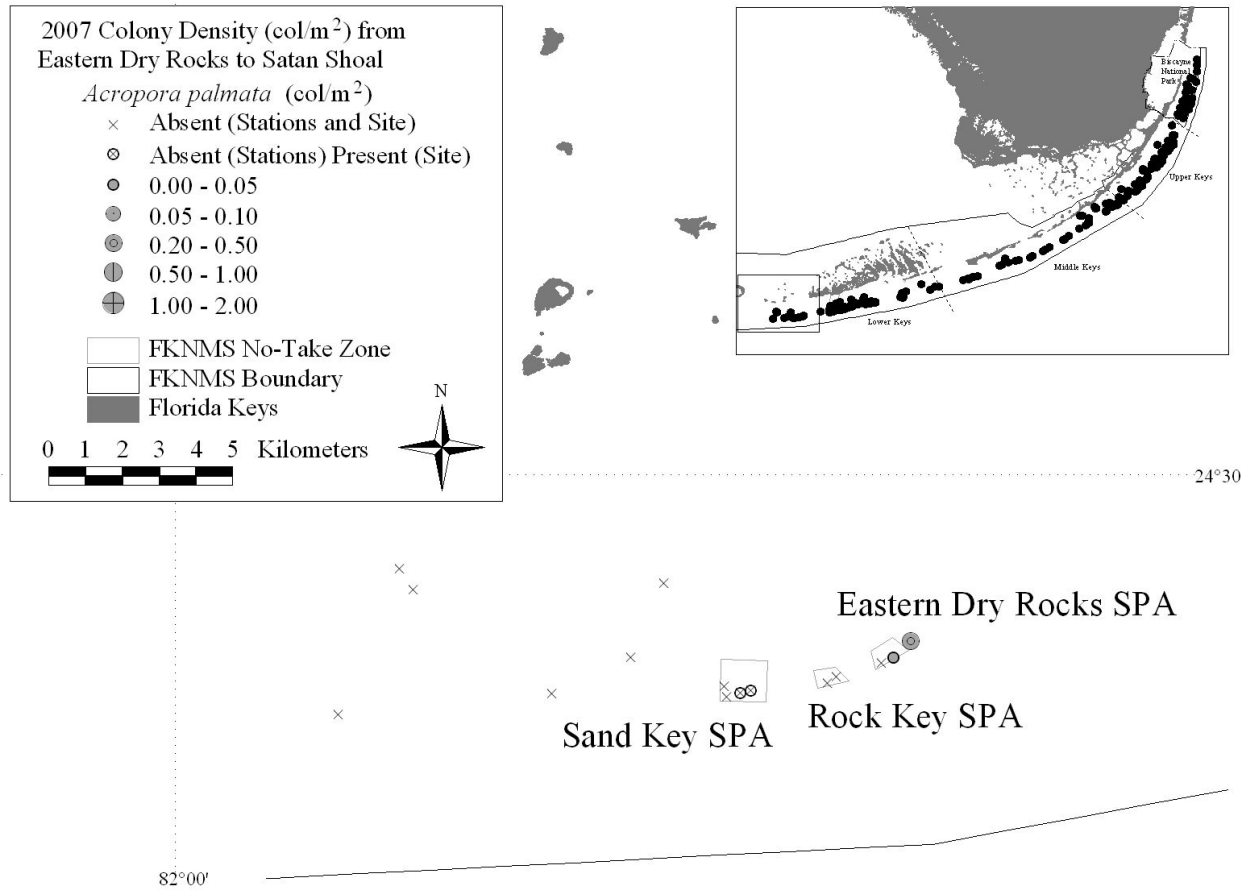


Figure 25. Impacts to staghorn (*Acropora cervicornis*) and elkhorn (*A. palmata*) coral documented during June-August 2007 in Biscayne National Park and the Florida Keys National Marine Sanctuary.

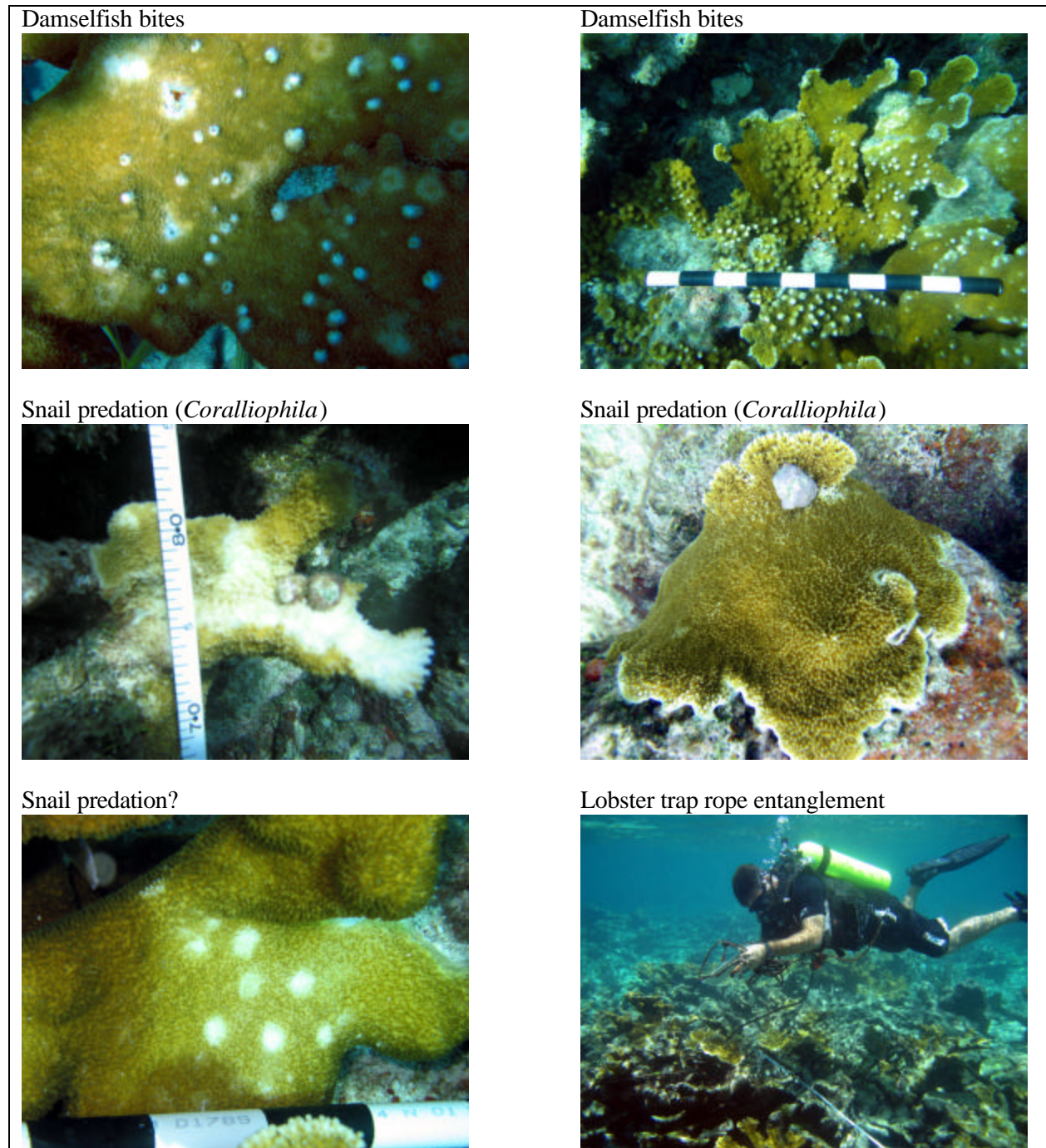


Figure 26. *Coralliophila* and other gastropod mollusks surveyed for density, size, and substratum occupancy in the Florida Keys National Marine Sanctuary and Biscayne National Park during June-August 2007.

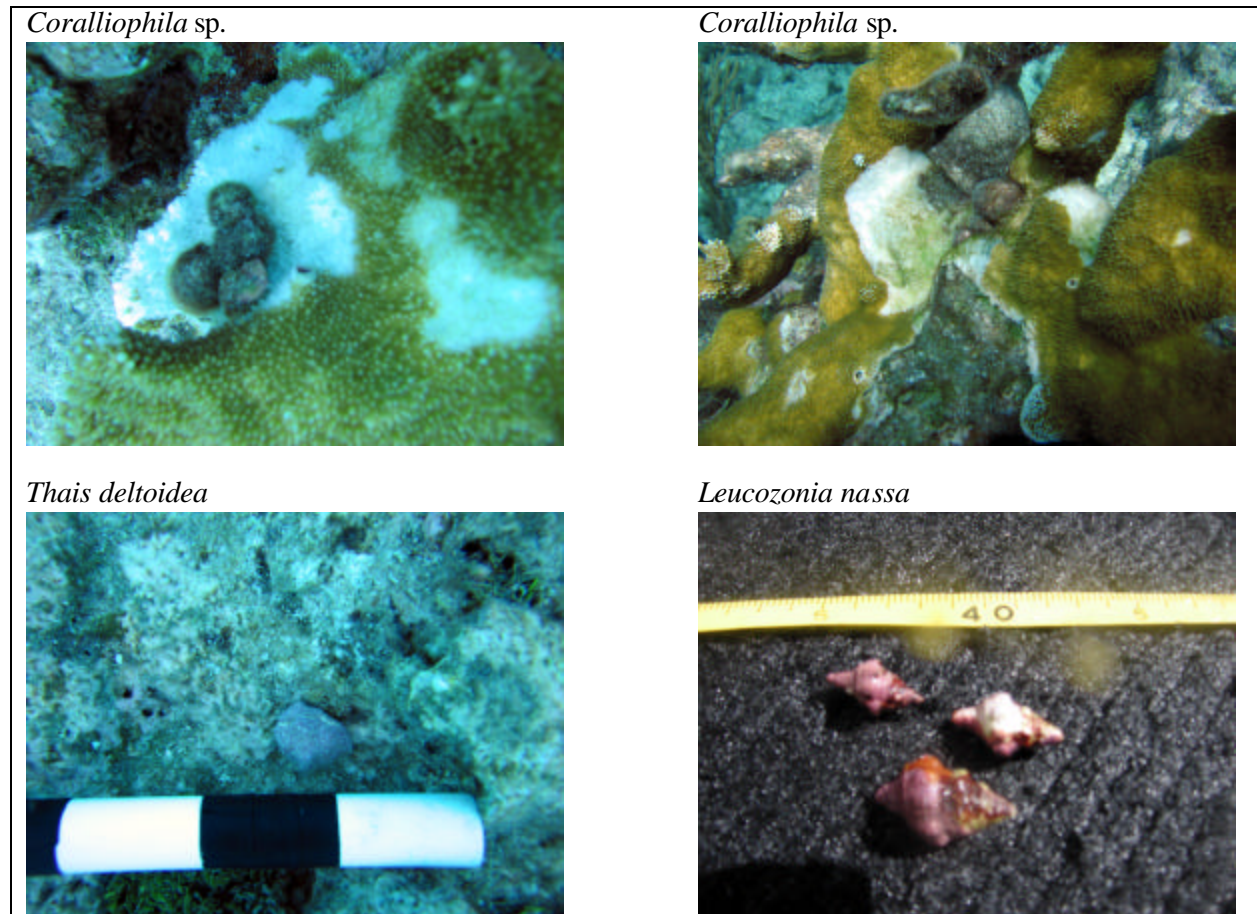


Figure 27. Total shell length distribution of *Coralliophila* sp. and other gastropod mollusks in the Florida Keys National Marine Sanctuary and Biscayne National Park measuring during June-August 2007 at 235 hard-bottom and coral reef sites.

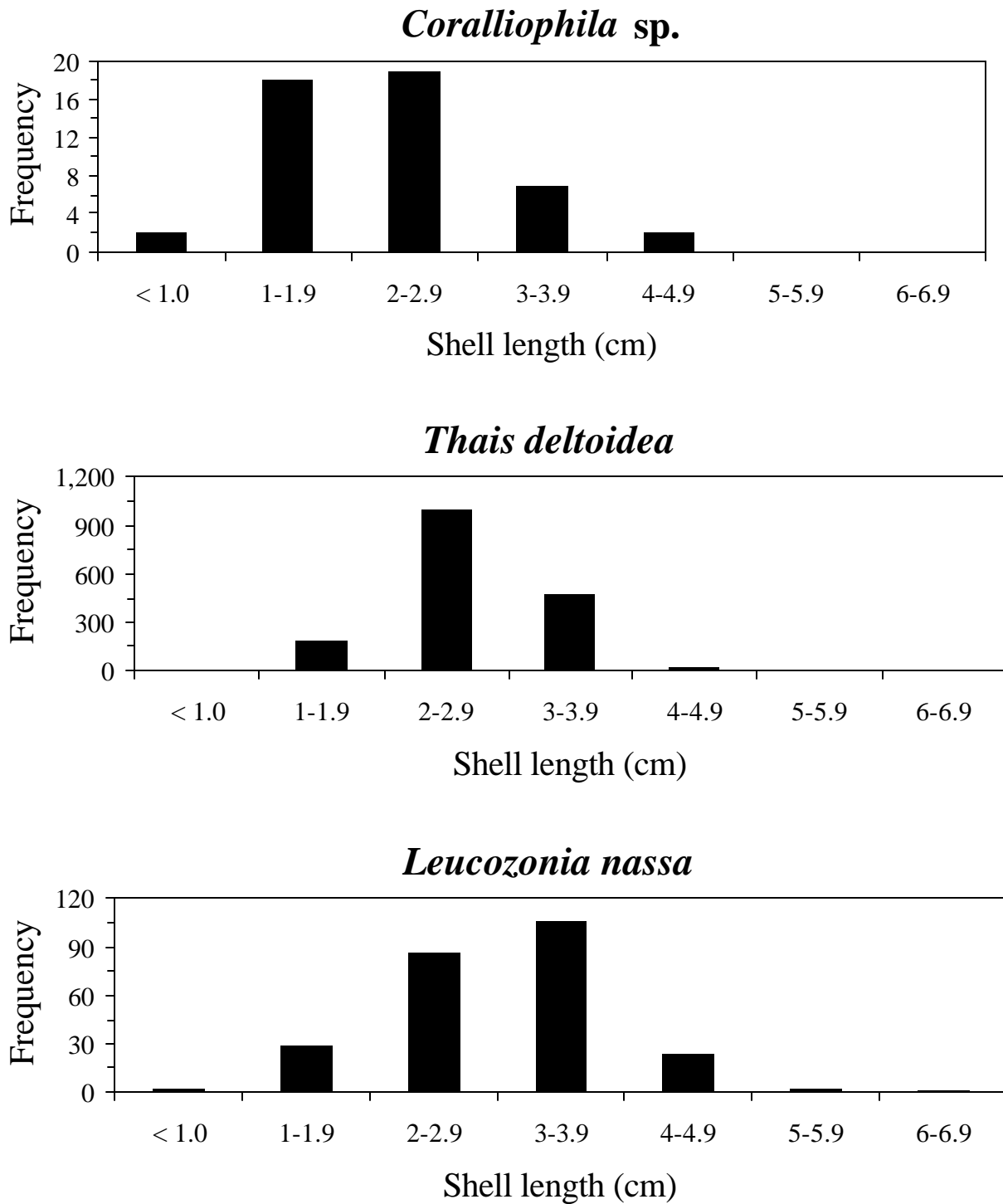


Figure 28. Urchin species surveyed for density and test diameter in the Florida Keys National Marine Sanctuary and Biscayne National Park during June-August 2007. Not shown are *Echinometra lucunter* (rock boring urchin), *Lytechinus variegatus*, and *Tripneustes ventricosus*.

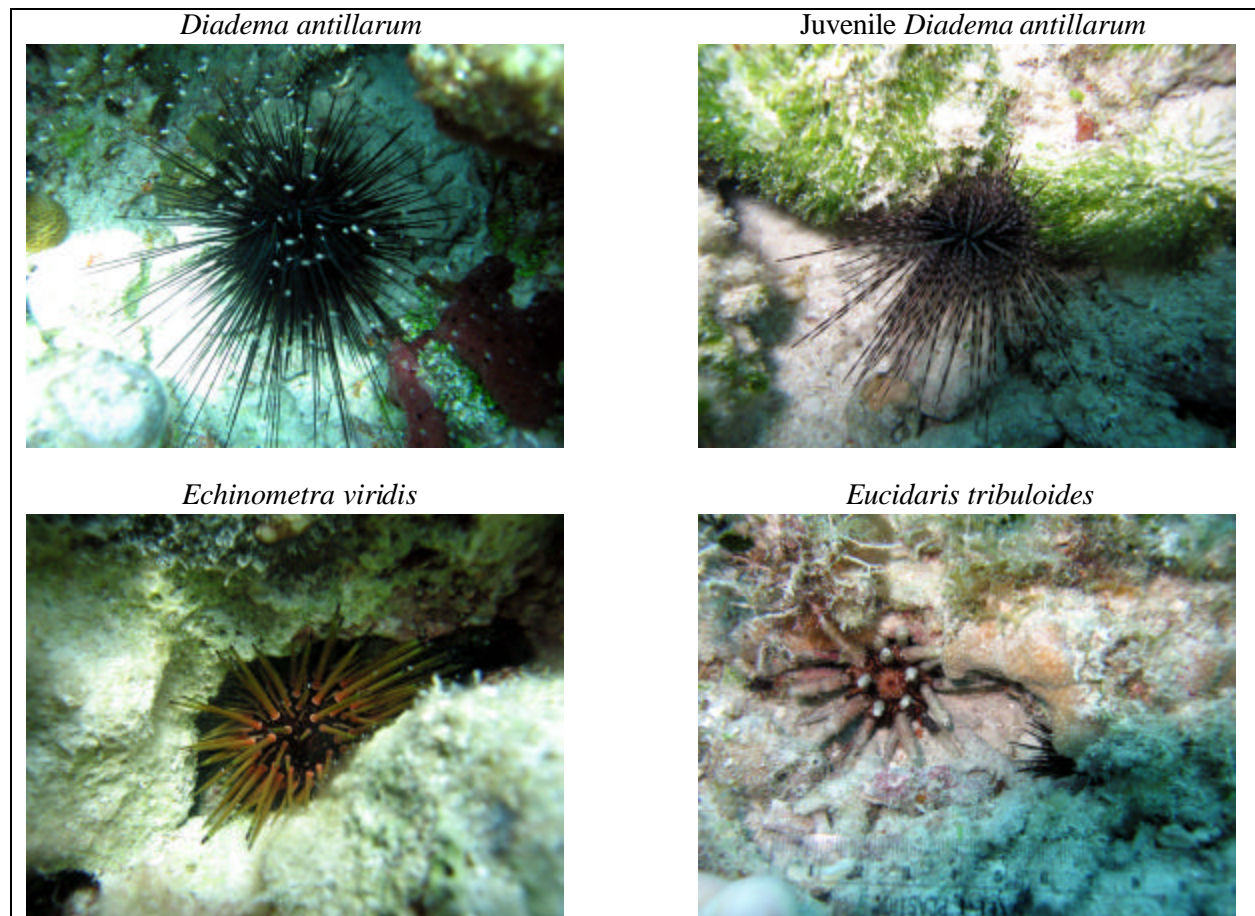


Figure 29. Size distribution of the urchins *Diadema antillarum*, *Echinometra viridis*, and *Eucidaris tribuloides* in the Florida Keys National Marine Sanctuary and Biscayne National Park measuring during June-August 2007 at 235 hard-bottom and coral reef sites.

