

# Suggested Reading - Honduras Marine

## Projects - links to research areas

[Fish and Fisheries](#)

[Mangroves](#)

[Reef Structure and Benthic Coverage](#)

[Human Impact](#)

[Boas and Ctenosaur](#)

Also check the Operation Wallacea website library pages for publications and research reports

## Fish and Fisheries projects

**The effects of changing reef structure on coral reef fish populations and its consequences for *fishermen/dive tourism***

### **The importance of fish to a healthy functioning reef**

Appeldoorn RS (2008) Transforming reef fisheries management: application of an ecosystem-based approach in the USA Caribbean. *Environmental Conservation*. **35**; 232-241

Beck MW, Heck KL, Able KW, Childers DL, Eggleston DB, Gillanders BM, Halpern B, Hays CG, Hoshino K, Minello TJ, Orth RJ, Sheridan PF, & Weinstein MR (2001) The identification, conservation, and management of estuarine and marine nurseries for fish and invertebrates. *Bioscience* **51**:633-641

Bell JD, & Galzin R (1984) Influence of Live Coral Cover on Coral-Reef Fish Communities. *Marine Ecology Progress Series*. **15**:265-274

Caselle JE, Warner RR (1996) Variability in recruitment of coral reef fishes: The importance of habitat at two spatial scales. *Ecology*. **77**:2488-2504

Chabanet P, Ralambondrainy H, Amanieu M, Faure G, Galzin R (1997) Relationships between coral reef substrata and fish. *Coral Reefs*. **16**:93-102

Dahlgren CP, Kellison GT, Adams AJ, Gillanders BM, Kendall MS, Layman CA, Ley JA, Nagelkerken I, Serafy JE (2006) Marine nurseries and effective juvenile habitats: concepts and applications. *Marine Ecology Progress Series* **312**:291-295

- Francini RB, et al., (2008) Dynamics of fish assemblages on coral reefs subjected to different management regimes in the Abrolhos Bank, eastern Brazil. *Aquatic Conservation- Marine and Freshwater Ecosystems*. **18**; 1166-1179
- Gratwicke B, & Speight MR, (2005) Effects of habitat complexity on Caribbean marine fish assemblages. *Marine Ecology Progress Series*. **292**; 301-310
- Gobert, B., et al (2005) Early stages of snapper-grouper exploitation in the Caribbean (Bay Islands, Honduras). *Fisheries Research*. **73**; 159-169
- Grober-Dunsmore R, et al., (2008) Influence of landscape structure, on reef fish assemblages. *Landscape Ecology*. **23**; 37-53
- Grober-Dunsmore R, et al., (2007) Reef fish and habitat relationships in a Caribbean seascape: the importance of reef context. *Coral Reefs*. **26**; 201-216
- Kramer KL, & Heck KL (2007) Top-down trophic shifts in Florida Keys patch reef marine protected areas. *Marine Ecology Progress Series*. **349**; 111-123
- Mumby PJ, et al., (2007) Thresholds and the resilience of Caribbean coral reefs. *Nature*. **450**; 98-101
- Perez A (2009) Fisheries management at the tri-national border between Belize, Guatemala and Honduras. *Marine Policy*. **33**; 195-200
- Pinnegar, J.K., Polunin, N.V.C, Francour, P., Badalamenti, F., Chemello, R., Harmelin-Vivien, M.L., Hereu, B., Milazzo, M., Zabala, M., D'Anna, G. and Pipitone, C. (2000) Trophic cascades in benthic marine ecosystems: lessons for fisheries and protected-area management. *Environmental Conservation* **27** (2): 179-200.
- Tolimieri N (1995) Effects of microhabitat characteristics on the settlement and recruitment of a coral reef fish at two spatial scales. *Oecologia*. **102**:52-63

## **Mangrove Projects**

### **The consequences of human disturbance and pollution on the health and/or functioning of the mangrove systems on Utila**

#### ***General***

- Alongi DM et al., (2008) Growth and development of mangrove forests overlying smothered coral reefs, Sulawesi and Sumatra, Indonesia. *Marine Ecology Progress Series*. **370**; 97-109
- Alongi DM (2002) Present state and future of the world's mangrove forests. *Environmental Conservation*. **29**; 331-349

- Armitage D (2002) Socio-institutional dynamics and the political ecology of mangrove forest conservation in Central Sulawesi, Indonesia. *Global Environmental Change-Human and Policy Dimensions*. **12**; 203-217
- Bosire JO, et al., (2008) Functionality of restored mangroves: A review. *Aquatic Botany*. **89**; 251-259
- Cannicci S, et al., (2008) Faunal impact on vegetation structure and ecosystem function in mangrove forests: A review. *Aquatic Botany*. **89**; 186-200
- Duke NC, et al., (2007) A world without mangroves? *Science*. **317**; 41-42
- Ellison AM (2008) Managing mangroves with benthic biodiversity in mind: Moving beyond roving banditry. *Journal of Sea Research*. **59**; 2-15
- Ewel KC, et al., (1998) Different kinds of mangrove forests provide different goods and services. *Global Ecology and Biogeography*. **7**; 83-94
- Gilman EL, et al., (2008) Threats to mangroves from climate change and adaptation options: A review. *Aquatic Botany*. **89**; 237-250
- Harborne AR, et al., (2006) The functional value of Caribbean coral reef, seagrass and mangrove habitats to ecosystem processes. *Advances in Marine Biology*. **50**; 57-189
- Nagelkerken I, et al., (2008) The habitat function of mangroves for terrestrial and marine fauna: A review. *Aquatic Botany*. **89**; 155-185
- Naylor RL, et al., (2002) Migration, markets, and mangrove resource use on Kosrae, Federated States of Micronesia. *AMBIO*. **31**; 340-350
- Ronnback P, et al., (2007) The return of ecosystem goods and services in replanted mangrove forests: perspectives from local communities in Kenya. *Environmental Conservation*. **34**; 313-324
- Walters BB, et al., (2008) Ethnobiology, socio-economics and management of mangrove forests: A review. *Aquatic Botany*. **89**; 220-236
- Walters BB (2004) Local management of mangrove forests in the Philippines: Successful conservation or efficient resource exploitation? *Human Biology*. **32**; 177-195

### ***Fish nurseries***

- Dorenbosch M, et al., (2006) Seagrass beds and mangroves as potential nurseries for the threatened Indo-Pacific humphead wrasse, *Cheilinus undulatus* and Caribbean rainbow parrotfish, *Scarus quacamaia*. *Biological Conservation*. **129**; 277-282

- Dorenbosch M, et al., (2005) Indo-Pacific seagrass beds and mangroves contribute to fish density coral and diversity on adjacent reefs. *Marine Ecology Progress Series*. **302**; 63-76
- Drew CA, & Eggleston DB (2008) Juvenile fish densities in Florida Keys mangroves correlate with landscape characteristics. *Marine Ecology Progress Series*. **362**; 233-243
- Faunce CH, & Serafy JE (2008) Selective use of mangrove shorelines by snappers, grunts, and great barracuda. *Marine Ecology Progress Series*. **356**; 153-162
- Gratwicke B, et al., (2006) Fish distribution and ontogenetic habitat preferences in non-estuarine lagoons and adjacent reefs. *Environmental Biology of Fishes*. **76**; 191-210
- Grol MGC, et al., (2008) Mangroves and seagrass beds do not enhance growth of early juveniles of a coral reef fish. *Marine Ecology Progress Series*. **366**; 137-146
- Mumby PJ, et al., (2004) Mangroves enhance the biomass of coral reef fish communities in the Caribbean. *Nature*. **427**; 533-536
- Nagelkerken I (2007) Are non-estuarine mangroves connected to coral reefs through fish migration? *Bulletin of Marine Science*. **80**; 595-607
- Nagelkerken I, & van der Velde (2004) Are Caribbean mangroves important feeding grounds for juvenile reef fish from adjacent seagrass beds? *Marine Ecology Progress Series*. **274**; 143-151
- Tse P, et al., (2008) Nursery function of mangrove: A comparison with mudflat in terms of fish species composition and fish diet. *Estuarine Coastal and Shelf Science*. **80**; 235-242
- Unsworth RKF, et al., (2008) High connectivity of Indo-Pacific seagrass fish assemblages with mangrove and coral reef habitats. *Marine Ecology Progress Series*. **353**; 213-224

### ***Pollution and coastal protection***

- Fabricius KE, (2005) Effects of terrestrial runoff on the ecology of corals and coral reefs: review and synthesis. *Marine Pollution Bulletin*. **50**; 125-146
- Granek EF, & Ruttenberg BI (2007) Protective capacity of mangroves during tropical storms: a case study from 'Wilma' and 'Gamma' in Belize. *Marine Ecology Progress Series*. **343**; 101-105

- Hussian SA, & Badola R, (2008) Valuing mangrove ecosystem services: linking nutrient retention function of mangrove forests to enhanced agroecosystem production. *Wetlands Ecology and Management*. **16** (6); 441-450
- Kristensen E, et al., (2008) Emission of CO<sub>2</sub> and CH<sub>4</sub> to the atmosphere by sediments and open waters in two Tanzanian mangrove forests. *Marine Ecology Progress Series*. **370**; 53-67
- Lee SY, (2009) Mangrove macrobenthos: Assemblages, services, and linkages. *Journal of Sea Research*. **59**; 16-29
- Luhar M, et al., (2008) Interaction between flow, transport and vegetation spatial structure. *Environmental Fluid Mechanics*. **8**; 423-439
- Prasad MBK, (2008) Sedimentary nutrient dynamics in a tropical estuarine mangrove ecosystem. *Estuarine Coastal and Shelf Science*. **80** (1); 60-66
- Vermaat JE, & Thampanya U, (2006) Mangroves mitigate tsunami damage: A further response. *Estuarine Coastal and Shelf Science*. **69**; 1-3
- Walton MEM, et al., (2006) Are mangroves worth replanting? The direct economic benefits of a community-based reforestation project. *Environmental Conservation*. **33**; 335-343

### **Reef Structure and Benthic Coverage Projects**

#### **The importance of herbivory by sea urchins / parrot fish in maintaining coral dominance on coral reefs**

- Chiappone, M., Swanson, D.W., Miller, S.L. and Smith, S.G. (2001) Large-scale surveys on the Florida Reef Tract indicate poor recovery of the long-spined sea urchin *Diadema antillarum*. *Coral Reefs* **21**: 155–159.
- Edmunds, P.J. and Carpenter, R.C. (2001) Recovery of *Diadema antillarum* reduces macroalgal cover and increases abundance of juvenile corals on a Caribbean reef. *PNAS*. **98**: 5067-5071.
- Lessios, H.A. (2005) *Diadema antillarum* populations in Panama twenty years following mass mortality. *Coral Reefs* **24**: 125-127.
- Lessios, H.A., Robertson, D.R. and Cubit, J.D. (1984) Spread of *Diadema* mass mortality through the Caribbean. *Science* **226**: 335-337.
- Miller, R.J., Adams, A.J., Ebersole, J.P. and Ruiz, E. (2007) Evidence for positive density-dependent effects in recovering *Diadema antillarum* populations. *Journal of Experimental Marine Biology and Ecology* **349**: 215-222.

Miller, R.J, Adams, A.J., Ogden, N.B. and Ebersole, J.P. (2003) *Diadema antillarum* 17 years after mass mortality: is recovery beginning on St. Croix? *Coral Reefs* **22** (2): 181-187.

Myhre, S. and Acevedo-Gutierrez, A. (2007) Recovery of *Diadema antillarum* populations is correlated to increased coral and reduced macroalgal cover. *Marine Ecology-Progress Series* **329**: 205-210.

Steiner, S.C.C. and Williams, S.M. (2006) The Density and size distribution of *Diadema antillarum* in Dominica (Lesser Antilles): 2001-2004. *Marine Biology* **149**: 1071-1078.

### **Human Impact Projects**

#### **Assessing the impact of SCUBA divers on a coral reef health**

Barker NHL, & Roberts CM (2004) Scuba diver behaviour and the management of diving impacts on coral reefs. *Biological Conservation*, **120** (4); 481-489

Harriott V, et al., (1997) Recreational diving and its impact in marine protected areas in Eastern Australia. *AMBIO*. **26**; 173-179

Hasler H, & Ott (2008) Diving down the reefs? Intensive diving tourism threatens the reefs of the northern Red Sea. *Marine Pollution Bulletin*, **56** (10); 1788-1794

Hawkins JP, et al., (1999) Effects of recreational scuba diving on Caribbean coral and fish communities. *Conservation Biology*. **13**; 888-897

Lloret J, et al (2006) An alternative approach for managing scuba diving in small marine protected areas. *Aquatic Conservation – Marine and Freshwater Ecosystems*, **16** (6); 579-591

Medio D, et al., (1997) Effect of briefings on rates of damage to corals by scuba divers. *Biological Conservation*. **79**; 91-95

Moore SA, & Polley A (2007) Defining indicators and standards for tourism impacts in protected areas: Cape Range National Park, Australia. *Environmental Management*. **39**; 291-300

Rouphael AB, Inglis GJ (2002) Increased spatial and temporal variability in coral damage caused by recreational scuba diving. *Ecological Applications*. **12** (2); 427-440

- Rouphael AB, Inglis GJ (2001) "Take only photographs and leave only footprints"?: An experimental study of the impacts of underwater photographers on coral reef dive sites. *Biological Conservation*. **100**; 281-287
- Rouphael AB, & Inglis GJ (1998) Impacts of recreational scuba diving at sites with different reef topographies. *Biological Conservation*, **82** (3); 329-336
- Tratalos JA, & Austin TJ (2001) Impacts of recreational SCUBA diving on coral communities of the Caribbean island of Grand Cayman. *Biological Conservation*. **102** (1); 67-75
- Uyarra MC, & Cote IM (2007) The quest for cryptic creatures: Impacts of species-focused recreational diving on corals. *Biological Conservation*. **136** (1); 77-84
- Uyarra M, et al., (2009) Managing Dive Tourism for the Sustainable Use of Coral Reefs: Validating Diver Perceptions of Attractive Site Features. *Environmental Management*. **43**; 1-16

### **Human impacts on the competition for space between corals and algae on a reef**

- Coelho VR, & Manfrino C, (2007) Coral community decline at a remote Caribbean island: Marine no-take reserves are not enough. *Aquatic Conservation: Marine and Freshwater Ecosystems*. **17**; 666-685
- Crabbe JC, et al., (2008) Growth modelling indicates hurricanes and severe storms are linked to low coral recruitment in the Caribbean. *Marine Environmental Research*. **65**; 364-368
- Fabricius KE, (2005) Effects of terrestrial runoff on the ecology of corals and coral reefs: review and synthesis. *Marine Pollution Bulletin*. **50**; 125-146
- Flood VS, et al., (2005) Historical and ecological analysis of coral communities in Castle Harbour (Bermuda) after more than a century of environmental perturbation. *Marine Pollution Bulletin*. **51**; 545-557
- Gratwicke, B. and Speight, M.R. (2005) Effects of habitat complexity on Caribbean marine fish assemblages. *Marine Ecology Progress Series*. 292: 310-310
- Guzner B, et al., (2007) Population dynamics of the reef-building coral *Acropora hemprichii* as an indicator of reef condition. *Marine Ecology Progress Series*. **333**; 143-150
- Hennige SJ, et al., (2008) Photoacclimation, growth and distribution of massive coral species in clear and turbid waters. *Marine Ecology Progress Series*. **369**; 77-88

- Hoegh-Guldberg, O. (2006) Complexities of Coral Reef Recovery. *Science*. **311**: published by AAAS.
- Hughes TP, & Connell JH, (1999) Multiple stressors on coral reefs; A long-term perspective. *Limnology and Oceanography*. **44**; 932-940
- Lee, S.C (2006) Habitat complexity and consumer-mediated positive feedbacks on a Caribbean coral reef. *OIKOS* **112**: 442-447.
- Lirman D, & Fong P, (2007) Is proximity to land-based sources of coral stressors an appropriate measure of risk to coral reefs? An example from the Florida Reef Tract. *Marine Pollution Bulletin*. **54**; 779-791
- Mallela J, (2007) Coral reef encruster communities and carbonate production in cryptic and exposed coral reef habitats along a gradient of terrestrial disturbance. *Coral Reefs*. **26**; 775-785
- McClanahan TR, et al., (2008) Long-term changes in coral colony size distributions on Kenyan reefs under different management regimes and across the 1998 bleaching event. *Marine Biology*. **153**; 755-768
- Meesters EH, et al., (2001) Colony size-frequency distributions of scleractinian coral populations: spatial and interspecific variation. *Marine Ecology Progress Series*. **209**; 43-54
- Mumby PJ, et al., (2007) Thresholds and the resilience of Caribbean coral reefs. *Nature*. **450**; 98-101
- Ninio R, & Meekan MG, (2002) Spatial patterns in benthic communities and the dynamics of a mosaic ecosystem on the Great Barrier Reef, Australia. *Coral Reefs*. **21**; 95-103
- River GF, & Edmunds PJ, (2001) Mechanisms of interaction between macroalgae and scleractinians on a coral reef in Jamaica. *Journal of Experimental Marine Biology and Ecology*. **261**; 159-172
- Sams MA, & Keough MJ, (2007) Predation during early post-settlement varies in importance for shaping marine sessile communities. *Marine Ecology Progress Series*. **348**; 85-101
- Schleyer MH, et al., (2008) Long-term community changes on a high-latitude coral reef in the Greater St Lucia Wetland Park, South Africa. *Marine Pollution Bulletin*. **56**; 493-502
- Smith LD, et al., (2005) A demographic approach to monitoring the health of coral reefs. *Marine Pollution Bulletin*. **51**; 399-407

Wakeford M, et al., (2008) Decadal trends in a coral community and evidence of changed disturbance regime. *Coral Reefs*. **27**; 1-13

### **Boas and Ctenosaur Projects**

#### **Understanding the ecology and abundance of the endemic *Bay Island Boa Constrictor* / *Ctenosaur* on the Cayos Cochinos and the implications for its survival**

Aubret F, et al., (2004) Adaptive development plasticity in snakes. *Nature*. **431**; 261-262

Boback, S.M. (2005) Natural History and Conservation of Island Boas (*Boa constrictor*) in Belize. *Copeia* **2005**: 879-884.

Boback, S.M. (2003) Body Size Evolution in Snakes: Evidence from Island Populations. *Copeia* **2003**: 81-94.

Burbrink, F.T. (2005) Inferring the phylogenetic position of *Boa constrictor* among the Boinae. *Molecular Phylogenetics and Evolution* **34**: 167-180.

Case, T.J. (1978) A General Explanation for Insular Body Size Trends in Terrestrial Vertebrates. *Ecology* **59**: 1-18.