<u>Caribbean Coral Spawning – Annotated Citations</u>

Maureen Trnka - December 2006

Acosta, A. and S. Zea. 1997. Sexual reproduction of the reef coral *Montastrea cavernosa* (scleractinia: Faviidae) in the Santa Marta area, Caribbean coast of Colombia. Marine Biology **128**: 141-148.

Description of work: Field and Laboratory. Location: Santa Marta, Colombia. Keywords: Montastraea cavernosa, Coral, Reproduction, Spawning, Photoperiod, Lunar cycles, Temperature, Gametogenesis

Adey, W.H., W. Gladfelter, J. Ogden and R. Dill. 1977. Field guidebook to the reefs and reef communities of St. Croix, Virgin Islands. Third International Symposium on Coral Reefs, Atlantic Reef Committee, University of Miami 59 pp.

Description of work: Field. Location: St. Croix, Virgin Islands. Keywords: Acropora spp., Montastraea annularis, Diploria spp., Porites astreoides, Siderastrea spp., Agaricia spp., Isophyllia sinuosa, Mycetophyllia ferox, Mussa angulosa, Colpophyllia spp., Coral, Reef, Geology, Climate, Distribution, Ecology, Algae

Almy, C.C. and C. Carrion-Torres. 1963. Shallow-water stony corals of Puerto Rico. Caribbean Journal of Science **3:** 133-162.

Description of work: Field. Location: La Parguera, Puerto Rico. Keywords: Millepora spp., Montastraea spp., Porites spp., Siderastrea spp., Meandrina meandrites, Manicina areolata, Isophyllia spp., Favia spp., Dendrogyra cylindrus, Diploria spp., Acropora spp., Coral, Distribution, Morphology, Habitat, Population

Baggett, L.S. and T.J. Bright. 1985. Coral recruitment at the East Flower Garden reef. Proceedings of the 5th International Coral Reef Congress **4:** 379-384.

Description of work: Field. Location: Flower Garden Banks, Gulf of Mexico. Keywords: Agaricia agaricites, Porites astreoides, Favia fragum, Coral, Recruitment, Seasonality, Settlement, Substratum

Bak, R.P.M. and M.S. Engel. 1979. Distribution, abundance and survival of juvenile hermatypic corals (scleractinia) and the importance of life history strategies in the parent coral community. Marine Biology **54:** 341-352.

Description of work: Field. Location: Curaçao and Bonaire, Netherlands Antilles. Keywords: Agaricia spp., Montastraea annularis, Montastraea cavernosa, Madracis spp., Acropora palmata, Helioseris cucullata, Coral, Distribution, Abundance, Juveniles, Depth, Mortality, Settlement, Sediment, Growth

Bassim, K.M. and P.W. Sammarco. 2003. Effects of temperature and ammonium on larval development and survivorship in a scleractinian coral (*Diploria strigosa*). Marine Biology **142**: 241-252.

Description of work: Field and Laboratory. Location: Flower Garden Banks, Gulf of Mexico. Keywords: Diploria strigosa, Coral, Reproduction, Temperature, Nutrient enrichment, Ammonium, Larvae

Bassim, K.M., P.W. Sammarco and T.L. Snell. 2002. Effects of temperature on success of (self and non-self) fertilization and embryogenesis in *Diploria strigosa* (Cnidaria, Scleractinia). Marine Biology **140**: 479-488.

Description of work: Field and Laboratory. Location: Flower Garden Banks, Gulf of Mexico. Keywords: Diploria strigosa, Coral, Reproduction, Temperature, Selfing, Out-crossing, Fertilization, Larvae, Embryonic development

Baums, I.B., M.W. Miller and M.E. Hellberg. 2005. Regionally isolated populations of an imperiled Caribbean coral, *Acropora palmata*. Molecular Ecology **14:** 1377-1390.

Description of work: Field and Laboratory. Location: Bahamas and Caribbean Islands. Keywords: Acropora palmata, Coral, Gene flow, Larval dispersal, Marine reserves, Population

Beaver, C.R., S.A. Earle, E.F. Evans, A.V.de la Cerda and J.W.Tunnel Jr. 2004. Mass spawning of reef corals within the Veracruz Reef System, Veracruz, Mexico. Coral Reefs **23:** 324.

Description of work: Field. Location: Veracruz, Mexico. Keywords: Montastraea faveolata, Montastraea cavernosa, Coral, Spawning, Lunar cycles, Marginal environment

Boland, G.S. 1998. Spawning observations of the scleractinian coral *Colpophylia natans* in the Northwest Gulf of Mexico. Gulf of Mexico Science **16:** 226-227.

Description of work: Field. Location: Flower Garden Banks, Gulf of Mexico. Keywords: Colpophyllia natans, Coral, Reproduction, Spawning, Lunar cycles, Gamete bundles, Morphology

Brazeau, D.A., D.F. Gleason and M.E. Morgan. 1998. Self-fertilization in brooding hermaphroditic Caribbean corals: Evidence from molecular markers. Journal of Experimental Marine Biology and Ecology **231**: 225-238.

Description of work: Field and Laboratory. Location: Florida Keys, USA. Keywords: Favia fragum, Porites astreoides, Self-fertilization, Outcrossing, Coral, Reproduction

Brazeau, D.A. and H.R. Lasker. 1989. The reproductive cycle and spawning in a Caribbean gorgonian. Biological Bulletin **176:** 1-7.

Description of work: Field. Location: San Blas Islands, Panama. Keywords: Plexuara A, Gorgonian, Coral, Spawning, Lunar cycles, Reproduction

Brazeau, D.A. and H.R. Lasker. 1990. Sexual reproduction and external brooding by the Caribbean gorgonian *Briareum asbestinum*. Marine Biology **104**: 465-474.

Description of work: Field and Laboratory. Location: La Paguera, Puerto Rico; San Blas Islands, Panama; Bahamas. Keywords: Briareum asbestinum, Gorgonian, Coral, Reproduction, Spawning, Spermatogenesis, Sex-ratio, Octocoral

Brazeau, D.A. and H.R. Lasker. 1992. Reproductive success in the Caribbean octocoral *Briareum asbestinum*. Marine Biology **114:** 157-163.

Description of work: Field. Location: San Blas Islands, Panama. Keywords: Briareum asbestinum, Octocoral, Reproduction, Fecundity, Embryo

Bright, T.J., G.P. Kraemer, G.A. Minnery and S.T. Viada. 1984. Hermatypes of the Flower Garden Banks, Northwestern Gulf of Mexico: A comparison to other western Atlantic reefs. Bulletin of Marine Science **34:** 461-476.

Description of work: Field. Location: Flower Garden Banks, Gulf of Mexico. Keywords: Stephanocoenia intercepta, Madracis spp., Agaricia spp., Siderastrea siderea, Porites spp., Colpophyllia spp., Diploria strigosa, Montastraea spp., Coral, Growth, Mortality, Distribution, Population, Diversity

Brooke, S. and C.M. Young. 2003. Reproductive ecology of a deep-water scleractinian coral, *Oculina varicosa*, from the southeast Florida shelf. Continental Shelf Research **23**: 847-858.

Description of work: Field and Laboratory. Location: Fort Pierce, Florida. Keywords: Oculina varicosa, Coral, Reproduction, Spawning, Temperature, Gametogenesis, Fecundity, Larval development

Brooke, S. and C.M. Young. 2005. Embryogenesis and larval biology of the ahermatypic scleractinian *Oculina varicosa*. Marine Biology **146**: 665-675.

Description of work: Field and Laboratory. Location: Fort Pierce, Florida. Keywords: Oculina varicosa, Coral, Reproduction, Spawning, Embryogenesis, Larval development, Temperature, Mortality

Budd, A.F. 1990. Longterm patterns of morphological variation within and among species of reef-corals and their relationship to sexual reproduction. Systematic Botany **15:** 150-165.

Description of work: Field and Laboratory. Location: Discovery Bay, Jamaica. Keywords: Porites astreoides, Siderastrea radians, Siderastrea siderea, Montastraea annularis, Montastraea cavernosa, Coral, Morphology, Reproduction, Outcrossing, Discreteness, Cohesiveness, Fossils

Cairns, S.D. 1999. Species richness or recent scleractinia. Atoll Research Bulleting **459**: 45 pp.

Description of work: Review. Location: None. Keywords: Coral, Species richness, Scleractinia, Diversity, Taxa, Population

Carlon, D.B. 2001. Depth-related patterns of coral recruitment and cryptic suspension-feeding invertebrates of Guana Island, British Virgin Islands. Bulletin of Marine Science **68:** 525-541.

Description of work: Field. Location: Guana Island, British Virgin Islands. Keywords: Agaricia spp., Porites spp., Diploria, Cladocora, Favia fragum, Coral, Recruitment rates

Carlon, D.B. 2002. Production and supply of larvae as determinants of zonation in a brooding tropical coral. Journal of Experimental Marine Biology and Ecology **268**: 33-46.

Description of work: Field and Laboratory. Location: St. Croix, US Virgin Islands. Keywords: Favia fragum, Coral, Reproduction, Fecundity, Lunar cycles, Depth, Settlement, Zonation

Carlon, D.B. and R.R. Olson. 1993. Larval dispersal distance as an explanation for adult spatial pattern in two Caribbean reef corals. Journal of Experimental Marine Biology and Ecology **173**: 247-263.

Description of work: Field and Laboratory. Location: Jamaica, West Indies; Guana Island, British Virgin Islands. Keywords: Favia fragum, Agaricia agaricites, Coral, Larvae, Settlement, Dispersal, Swimming, Spatial patterns, Behavior

Chornesky, E.A. and E.C. Peters. 1987. Sexual reproduction and colony growth in the scleractinian coral *Porites astreoides*. Biological Bulletin **172**: 161-177.

Description of work: Field and Laboratory. Location: Discovery Bay, Jamaica. Keywords: Porites astreoides, Coral, Reproduction, Spawning, Lunar cycles, Fecundity, Growth, Seasonality

Coffroth, M.A. and H.R. Lasker. 1998. Population structure of a clonal gorgonian coral: The interplay between clonal reproduction and disturbance. Evolution **52:** 379-393.

Description of work: Field and Laboratory. Location: San Blas Islands, Panama; Florida Keys, USA. Keywords: Plexaura kuna, Gorgonian, Coral, DNA fingerprinting, Genotypic diversity, Disturbance, Clones, Vegetative Propagation

Cornell, H.V. and R.H. Karlson. 1996. Species richness of reef-building corals determined by local and regional processes. Journal of Animal Ecology **65**: 233-241.

Description of work: Review. Location: Worldwide. Keywords: Coral, Species richness, Disturbance, Niche, Saturation, Species pool, Community, Habitat

de Graaf, M., G.J. Geertjes and J.J. Videler. 1999. Observations on spawning of scleractinian corals and other invertebrates on the reefs of Bonaire (Netherlands Antilles, Caribbean). Bulletin of Marine Science **64:** 189-194.

Description of work: Field. Location: Bonaire, Netherlands Antilles. Keywords: Acropora cervicornis, Acropora palmata, Diploria labyrinthiformis, Diploria strigosa, Montastraea cavernosa, Montastraea annularis complex, Eusmillia fastigiata, Stephanocoenia intercepta, Madracis mirabilis, Coral, Reproduction, Spawning, Lunar cycles

Diamond, A. 2003. Identification and assessment of scleractinians at Tarou Point, Dominica, West Indies. Coastal Management **31:** 409-421.

Description of work: Field. Location: Dominica, West Indies. Keywords: Porites spp., Siderastrea spp., Agaricia spp., Meandrina meandrites, Leptioseris cucullata, Favia fragum, Diploria spp., Dichocoenia stokessi, Montastraea spp., Stephanocoenia intercepta, Madracis spp., Mycetphyllia danaana, Colpophyllia natans, Coral

Diekmann, O.E., R.P.M. Bak, W.T. Stam and J.L. Olsen. 2001. Molecular genetic evidence for probable reticulate speciation in the coral genus *Madracis* from a Caribbean fringing reef slope. Marine Biology **139**: 221-233.

Description of work: Field and Laboratory. Location: Curaçao, Netherlands Antilles. Keywords: Madracis complex, Madracis decactis, Madracis mirabilis, Madracis pharensis, Madracis senaria, Madracis formosa, Coral, Phylogeny, DNA sequence, Cloning

Duerden, J.E. 1902. West Indian madreporarian polyps. Memoirs of the National Academy of Sciences **8:** 401-597.

Description of work: Field. Location: Jamaica. Keywords: Agaricia agaricites, Diploria labyrinthiformis, Favia fragum, Manicia areolata, Isophyllia sinuosa, Porites porites, Siderastrea radians, Coral, Spawning, Planulae, Settlement, Growth

Duerden, J.E. 1904. The coral *Siderastrea radians* and its postlarval development. Carnegie Institution Washington **20:** 130 pp.

Description of work: Field, Laboratory and Review. Location: Jamaica. Keywords: Siderastrea radians, Coral, Anatomy, Histology, Larva, Spawning, Reproduction, Morphology

Edinger, E.N. and M.J. Risk. 1995. Preferential survivorship of brooding corals in a regional extinction. Paleobiology **21**: 200-219.

Description of work: Review; Field. Location: Caribbean; Puerto Rico. Keywords: Coral, Reproduction, Recruitment hypothesis, Dispersal hypothesis, Oligocene, Miocene, Survivorship, Distribution, Selection

Edmunds, P.J. 2000. Patterns in the distribution of juvenile corals and coral reef community structure in St. John US Virgin Islands. Marine Ecology Progress Series **202**: 113-124.

Description of work: Field. Location: St. John, Virgin Islands. Keywords: Coral, Juveniles, Scleractinians

Edmunds, P.J., R.D. Gates and D.F. Gleason. 2001. The biology of larvae from the reef coral *Porites astreoides*, and their response to temperature disturbances. Marine Biology **139**: 981-989.

Description of work: Field and Laboratory. Location: Florida Keys, USA. Keywords: Porites astreoides, Coral, Reproduction, Larvae, Spawning, Temperature, Mortality, Physiology

Fadlallah, Y.H. 1983. Sexual reproduction, development and larval biology in scleractinian corals. Coral Reefs **2:** 129-150.

Description of work: Review. Location: None. Keywords: Coral, Sexuality, Reproduction, Spawning, Planula, Larval behavior, Settlement, Metamorphosis, Gametogenesis, Fertilization, Development

Fenner, D. 1999. New observations on the stony coral (Scleractinia, Milleporidae, and Stylasteridae) species of Belize (Central America) and Cozumel (Mexico). Bulletin of Marine Science **64:** 143-154.

Description of work: Field and Review. Location: Belize, Central America; Cozumel, Mexico. Keywords: Scleractinian, Coral, Distribution, Depth, Species Richness, Abundance, Morphology

Fenner, D. 2001. Biogeography of three Caribbean corals (scleractinia) and the invasion of *Tubastraea coccinea* into the Gulf of Mexico. Bulletin of Marine Science **69:** 1175-1189.

Description of work: Review. Location: Caribbean. Keywords: Tubastraea coccinea, Mycetophyllia reesi, Leptoseris cailleti, Coral, Range, Dispersal

Fukami, H., A.F. Budd, G. Paulay, A. Solé-Cava, C.A. Chen, K. Iwao and N. Knowlton. 2004. Conventional taxonomy obscures deep divergence between Pacific and Atlantic corals. Nature **427**: 832-835.

Description of work: Laboratory. Location: Atlantic; Indo-west Pacific. Keywords: Coral, Phylogeny, DNA, Taxonomy, Genera, Families, Lineage

Ginsburg, R.N., E. Gischler and W.E. Kiene. 2001. Partial mortality of massive reef-building corals: An index of patch reef condition, Florida reef tract. Bulletin of Marine Science **69:** 1149-1173.

Description of work: Field. Location: Florida Keys, USA. Keywords: Coral, Scleractinian, Mortality, Distribution, Anthropogenic impacts, Colony size

Gittings, S.R., G.S. Boland, K.J.P. Deslarzes, C.L. Combs, B.S. Holland and T.J. Bright. 1992.

Mass spawning and reproductive viability of reef corals at the East Flower Garden Bank,
Northwest Gulf of Mexico. Bulletin of Marine Science **51:** 420-428.

Description of work: Field. Location: Flower Garden Banks, Gulf of Mexico. Keywords: Montastraea annularis, Montastraea cavernosa, Diploria strigosa, Coral, Reproduction, Spawning, Lunar cycles, Recruitment

Gladfelter, E.H., R.K. Monahan and W.B. Gladfelter. 1978. Growth rates of five reef-building corals in the Northeastern Caribbean. Bulletin of Marine Science **28**: 728-734.

Description of work: Field. Location: U.S. Virgin Islands. Keywords: Montastraea annularis, Porites astreoides, Acropora cervicornis, Acropora prolifera, Acropora palmata, Coral, Growth, Temperature, Reef zones, Calcification

Gleason, D.F., D.A. Brazeau and D. Munfus. 2001. Can self-fertilizing coral species be used to enhance restoration of Caribbean reefs? Bulletin of Marine Science **69**: 933-943.

Description of work: Field and Laboratory. Location: Florida Keys, USA. Keywords: Favia fragum, Porites astreoides, Agaricia agaricites, Self-fertilization, Transplantation, Coral, Reproduction

Glynn, P.W., S.B. Colley, C.M. Eakin, D.B. Smith, J. Cortés, N.J. Gassman, H.M. Guzmán, J.B.D. Rosario and J.S. Feingold. 1994. Reef coral reproduction in the eastern Pacific: Costa Rica, Panamá, and Galápagos Islands (Ecuador). II. Poritidae. Marine Biology **118:** 191-208.

Description of work: Field and Laboratory. Location: Costa Rica, Panamá, Galápagos Islands. Keywords: Porites lobata, Porites panamensis, Reproduction, Coral, Pacific, Gametogenesis, Spawning, Fecundity, Lunar cycles

Glynn, P.W., S.B. Colley, J.H. Ting, J.L. Maté and H.M. Guzmán. 2000. Reef coral reproduction in the eastern Pacific: Costa Rica, Panamá and Galápagos Islands (Ecuador). IV. Agariciidae, recruitment and recovery of *Pavona varians* and *Pavona* sp.a. Marine Biology **136**: 785-805.

Description of work: Field and Laboratory. Location: Costa Rica, Panamá, Galápagos Islands. Keywords: Pavona varians, Pavona sp., Coral, Reproduction, Pacific, Spawning, Fecundity, Gametogenesis, Lunar cycles

Goldberg, W.M. 1973. The ecology of the coral-octocoral communities off the Southeast Florida coast: Geomorphology, species composition, and zonation. Bulletin of Marine Science **23:** 465-488.

Description of work: Field. Location: Florida, USA. Keywords: Coral, Scleractinian, Gorgonian, Zonation, Reef tract, Morphology, Biomass, Abundance

Goreau, N.I., T.J. Goreau and R.L. Hayes. 1981. Settling, survivorship and spatial aggregation in planulae and juveniles of the coral *Porites porites* (Pallas). Bulletin of Marine Science **31:** 424-435.

Description of work: Laboratory. Location: Jamaica. Keywords: Porites porites, Coral, Spawning, Settlement, Mortality, Spatial distribution, Recruitment

Goreau, T.F. 1959. The ecology of Jamaican coral reefs I. Species composition and zonation. Ecology **40**: 67-90.

Description of work: Field. Location: Jamaica; Barbados, West Indies. Keywords: Scleractinian, Coral, Zonation, Growth, Reef, Fauna, Geology, Distribution

Goreau, T.F. and J.W. Wells. 1967. The shallow-water scleractinia of Jamaica: Revised list of species and their vertical distribution range. Bulletin of Marine Science 17: 442-453.

Description of work: Field. Location: Jamaica. Keywords: Coral, Scleractinian, Depth range, Distribution, Density, Gradient, Abundance

Hagman, D.K., S.R. Gittings and K.J.P. Deslarzes. 1998a. Timing, species participation, and environmental factors influencing annual mass spawning at the Flower Garden Banks (Northwest Gulf of Mexico). Gulf of Mexico Science **16:** 170-179.

Description of work: Field. Location: Flower Garden Banks, Gulf of Mexico. Keywords: Colpophyllia natans, Diploria strigosa, Montastraea annularis, Montastraea faveolata, Montastraea franksi, Montastraea cavernosa, Stephanocoenia intercepta, Coral, Reproduction, Spawning, Lunar cycles, Temperature, Light

Hagman, D.K., S.R. Gittings and P.D. Vize. 1998b. Fertilization in broadcast-spawning corals of the Flower Garden Banks National Marine Sanctuary. Gulf of Mexico Science **16:** 180-187.

Description of work: Field and Laboratory. Location: Flower Garden Banks, Gulf of Mexico. Keywords: Colpophyllia natans, Diploria strigosa, Montastraea annularis, Montastraea faveolata, Montastraea franksi, Montastraea cavernosa, Stephanocoenia intercepta, Coral, Reproduction, Self-fertilization, Outcrossing

Hall, V.R. and T.P. Hughes. 1996. Reproductive strategies of modular organisms: Comparative studies of reef-building corals. Ecology **77:** 950-963.

Description of work: Field. Location: Australia. Keywords: Acropora hyacinthus, Acropora nana, Acropora gemmifera, Acropora millepora, Goniastrea retiformis, Stylophora pistillata, Coral, Reproduction, Fecundity, Polyp, Hermaphrodism, Sex allocation

Harrison, P.L. and C.C. Wallace. 1990. Reproduction, dispersal and recruitment of scleractinian corals. Ecosystems of the World 25: Coral Reefs Elsevier Science Publishers, New York 7: 550 pp.

Description of work: Review. Location: Caribbean, Red Sea, Great Barrier Reef, Japan, Pacific. Keywords: Coral, Reproduction, Recruitment, Sexual patterns, Spawning, Brooding, Development, Fecundity, Gametogenesis, Lunar cycles, Eggs, Breeding, Fertilization, Embryogenesis, Dispersal, Planulae, Settlement, Larvae, Growth

Highsmith, R.C. 1982. Reproduction by fragmentation in corals. Marine Ecology Progress Series **7:** 207-226.

Description of work: Review. Location: Caribbean; Eastern Pacific; Indo-West Pacific. Keywords: Coral, Fragmentation, Reproduction, Mortality, Asexual, Habitat, Life history

Hoke, S.M., S.B. Colley and J.S. Feingold. 2002. Sexual reproduction in the elliptical star coral, *Dichocoenia stokesi*, Milne-Edwards & Haime, (Cnidaria: Scleractinia). International Society for Reef Studies, European Meeting, poster presentation.

Description of work: Field. Location: Florida, USA. Keywords: Dichocoenia stokesi, Coral, Spawning, Reproduction, Lunar cycles, Disease

Hopkins, T.S., D.R. Blizzard, S.A. Brawley, S.A. Earle, D.E. Grimm, D.K. Gilbert, P.G. Johnson, E.H. Livingston, C.H. Lutz, J.K. Shaw and B.B. Shaw. 1977. A preliminary characterization of the biotic components of composite strip transects on the Florida middlegrounds, Northeastern Gulf of Mexico. Proceedings of the 3rd International Coral Reef Symposium 1: 31-37.

Description of work: Field. Location: Florida, Gulf of Mexico. Keywords: Coral, Fauna, Assemblages, Scleractinian, Distribution, Flora, Storm effects, Algae

Hughes, T.P. and J.H. Connell. 1987. Population dynamics based on size or age? A reef-coral analysis. The American Naturalist **129**: 818-829.

Description of work: Field. Location: Queensland, Australia. Keywords: Acropora spp., Porites spp., Pocillopora damicornis, Coral, Mortality, Growth, Age, Size-class

Hughes, T.P. and J.E. Tanner. 2000. Recruitment failure, life histories, and long-term decline of Caribbean corals. Ecology **81:** 2250-2263.

Description of work: Field and Laboratory. Location: Jamaica. Keywords: Montastraea annularis, Agaricia agaricites, Coral, Matrix model, Recruitment, Growth, Mortality

Humann, P. 1993. Reef Coral Identification: Florida, Caribbean, Bahamas. New World Publications, Inc. 239 pp.

Description of work: Review. Location: Florida; Caribbean; Bahamas. Keywords: Coral, Algae, Abundance, Distribution, Morphology, Size, Marine plants, Habitat

Jackson, J.B.C. and A.G. Coates. 1986. Life cycles and evolution of clonal (modular) animals. Philosophical Transactions of the Royal Society of London **B313:** 7-22.

Description of work: Review. Location: None. Keywords: Montastraea annularis, Acropora spp., Coral, Life cycle, Evolution, Reproduction, Recruitment, Dispersal, Biogeography

Johnson, K.G. 1992a. Population dynamics of a free-living coral: Recruitment, growth and survivorship of *Manicina areolata* (Linnaeus) on the Caribbean coast of Panama. Journal of Experimental Marine Biology and Ecology **164:** 171-191.

Description of work: Field and Laboratory. Location: San Blas Islands, Panama. Keywords: Manicina areolata, Coral, Recruitment, Population dynamics, Mortality, Growth, Dispersal

Johnson, K.G. 1992b. Synchronous planulation of *Manicina areolata* (Scleractinia) with lunar periodicity. Marine Ecology Progress Series **87:** 265-273.

Description of work: Field & Laboratory. Location: San Blas Islands, Panama. Keywords: Manicina areolata, Coral, Lunar cycles, Reproduction, Spawning, Fecundity

Kapela, W. and H.R. Lasker. 1999. Size-dependent reproduction in the Caribbean gorgonian *Pseudoplexaura porosa*. Marine Biology **135**: 107-114.

Description of work: Field and Laboratory. Location: San Blas Islands, Panama. Keywords: Pseudoplexaura porosa, Goronian, Coral, Reproduction, Lunar cycles, Spawning, Fecundity

Karlson, R.H. 1981. Reproductive patterns in *Zoanthus* spp. from Discovery Bay, Jamaica. Proceedings of the 4th International Coral Reef Symposium **2:** 699-704.

Description of work: Field and Laboratory. Location: Discovery Bay, Jamaica. Keywords: Zoanthus spp., Zoanthids, Reproduction, Spatial distribution, Polyp, Spermaria, Ova

Knowlton, N. 2001. Who are the players on coral reefs and does it matter? The importance of coral taxonomy for coral reef management. Bulletin of Marine Science **69**: 305-307.

Description of work: Review. Location: None. Keywords: Montastraea annularis, Taxonomy, Reproduction, Coral, Restoration, Management

Knowlton, N., J.L. Maté, H.M. Guzmán, R. Rowan and J. Jara. 1997. Direct evidence for reproductive isolation among the three species of the *Montastraea annularis* complex in Central America (Panamá and Honduras). Marine Biology **127:** 705-711.

Description of work: Field and Laboratory. Location: Honduras; San Blas Islands, Panamá. Keywords: Montastraea annularis complex, Montastraea faveolata, Montastraea franksi, Coral, Reproduction, Spawning, Lunar cycles, Diurnal cycles, Selfing, Hybridization

Kojis, B.L. and N.J. Quinn. 1981. Reproductive strategies in four species of *Porites* (scleractinia). Proceedings of the 4th International Coral Reef Symposium **2:** 145-151.

Description of work: Field and Laboratory. Location: Great Barrier Reef, Australia. Keywords: Porites andrewsi, Porites lobata, Porites lutea, Porites murrayensis, Hermatypic coral, Spawning, Reproduction, Planulation, Distribution, Abundance

Kojis, B.L. and N.J. Quinn. 2001. The importance of regional differences in hard coral recruitment rates for determining the need for coral restoration. Bulletin of Marine Science **69**: 967-974.

Description of work: Field. Location: St. Thomas, U.S. Virgin Islands. Keywords: Favia fragum, Porites astreoides, Porites spp., Agaricia spp., Millepora, Montastraea annularis, Coral, Recruitment rates, Reef recovery

Lasker, H.R., K. Kim and M.A. Coffroth. 1996. Reproductive and genetic variation among Caribbean gorgonians: The differentiation of *Plexaura kuna*, new species. Bulletin of Marine Science **58:** 277-288.

Description of work: Field and Laboratory. Location: San Blas Islands, Panama. Keywords: Plexaura A, Plexaura homomalla, Gorgonian, Coral, Genetics, Reproduction, Morphology

Leonard, J.L. 2006. Sexual selection: lessons from hermaphrodite mating systems. Integrative and Comparative Biology **46**: 349-367.

Description of work: Review. Location: None. Keywords: Coral, Sexual selection, Hermaphrodite, Competition, Mate choice, Sexual dimorphism

Lewis, J.B. 1960. The coral reefs and coral communities of Barbados, W.I. Canadian Journal of Zoology **38:** 1133-1145.

Description of work: Field. Location: Barbados, West Indies. Keywords: Coral, Scleractinian, Abundance, Distribution, Reef development, Zonation

Lewis, J.B. 1974. The settlement behaviour of planulae larvae of the hermatypic coral *Favia fragum* (Esper). Journal of Experimental Marine Biology and Ecology **15:** 165-172.

Description of work: Field and Laboratory. Location: Barbados, West Indies. Keywords: Favia fragum, Coral, Settlement, Metamorphosis, Light, Substratum preference, Larvae behavior, Spawning

Lugo-Fernández, A., K.J.P. Deslarzes, J.M. Price, G.S. Boland and M.V. Morin. 2001. Inferring probable dispersal of Flower Garden Banks coral larvae (Gulf of Mexico) using observed and simulated drifter trajectories. Continental Shelf Research 21: 47-67.

Description of work: Field and Laboratory. Location: Flower Garden Banks, Gulf of Mexico. Keywords: Coral, Spawning, Dispersal, Currents, Drifters, Model, Hurricanes, Larvae, Trajectory

McGuire, M.P. 1998. Timing of larval release by *Porites astreoides* in the northern Florida Keys. Coral Reefs **17**: 369-375.

Description of work: Field and Laboratory. Location: Florida Keys, USA. Keywords: Porites astreoides, Coral, Reproduction, Spawning, Temperature, Lunar cycles, Fecundity

Meesters, E.H. and R.P.M. Bak. 1995. Age-related deterioration of a physiological function in the branching coral *Acropora palmata*. Marine Ecology Progress Series **121**: 203-209.

Description of work: Field. Location: Curação, Netherlands Antilles. Keywords: Acropora palmata, Coral, Damage, Regeneration, Growth, Age, Senescence

Mendes, J.M. and J.D. Woodley. 2002. Timing of reproduction in *Montastraea annularis*: relationship to environmental variables. Marine Ecology Progress Series **227**: 241-251.

Description of work: Field. Location: Kingston, Jamaica. Keywords: Montastraea annularis, Coral, Rainfall, Temperature, Spawning, Reproduction, Gametogenesis

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Description of work: Field and Laboratory. Location: San Blas Islands, Panama. Keywords: Montastraea annularis, Montastraea faveolata, Montastraea franksi, Coral, Morphology, Distribution, Behavior

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