7/27/62

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Certifications/ Special Skills/ Affiliations

PADI Certified Scuba Diver Advanced and Enriched Air

Computer Operating Skills

Technical and Journalistic Writing Skills including scientific and magazine publications High School and University Accredited Courses

Reefball Foundation, Board of Directors, 2004 -Ongoing.

Scientific Authority Committee Advisor Turks and Caicos Islands. 2003-Ongoing.

Department of Environmental and Coastal Resources.

Associate Faculty. 1998-Ongoing. Harbor Branch Oceanographic Institution, Aquaculture Training Programs

Education

M. Sc., 1992. Ecology, Florida Institute of Technology. Melbourne, Florida. B.Sc., 1983. Environmental/Aquaculture Technology, Florida Institute of Technology, Jensen Beach, Florida.

Professional Experience

Environmental / Aquaculture Consultant. 1994-Present. Currently employed by Greenflash Ltd., a Turks and Caicos based marine services company. Formerly self-employed (residing in the Turks and Caicos) as a consultant that specializes in biological research, aquaculture/environmental management, education and training programs, and the development of nature trail programs.

Over the past 25 years of my career, I have produced over 50 Strategic Environmental Assessments and/or Environmental Impact Assessments in various countries for marine ecological and aquaculture assessments. I have also produced a total of 14 scientific and technical publications, over 25 published articles on environmental related issues, and one environmentally orientated children's book. I have participated in and/or orchestrated over 25 Nature Trail or Conservation related projects and programs, including development of environmental education programs and curriculums for all ages; development from proposals to ongoing management of the nature trail and conservation

programs, as well as coral reef monitoring projects, artificial reef and reef restoration projects.

Research Associate. 1988-1994. Harbor Branch Oceanographic Institution, Inc. Tropical Aquaculture Department, Fort Pierce, Florida. Activities included: Research and maintenance of the spiny lobster (*Panulirus argus*) from pueruli to market stage, reproduction, spawning, larviculture and fisheries related research. Diet/growth studies of the Queen Conch (*Strombus gigas*). Research development and training programs of field nursery and growout techniques for the hard clam (*Mercenaria mercenaria*). Contract research, teaching and consulting for various Government and private agencies.

Environmental / Aquaculture Consultant. 1986-1987. Western Australia. Kailis and France, PTY. Ltd. Environmental Impact Assessments of Prawn Farming; Australian Aquaculture Ltd., Margaret River. Assisted in preliminary research of marron (Cherax sp.); Austasia Aquaculture Magazine, Perth. Aquaculture correspondent for sites visited through Australia, New Zealand, Asia and Pacific areas.

Project Manager. 1984-1985. Jamaica Aqua-Farms Ltd. Savanna-la-mar, Jamaica. Supervised hatchery and growout of *Macrobrachium rosenbergii* and *Tilapia nilotica*, and research with *Artemia salina* for hatchery nutrition. Managed and trained staff, monitored production, evaluated economics, and promoted sales.

Publications

Technical Reports

R. Wild, L. Slade, M. Pardee and C. Carleton. 2007. Towards Multi-user Marine Management in Montserrat. Technical Report for the Tourist Board of Montserrat. pp.102.

Harzen, S., B. Brunnick, K. Wood. And M. Pardee. 2007. Spatial and Environmental Analysis Part III. Detailed Analysis of Barbary Beach and Discovery Bay. Technical Report for EDSA and the Grand Bahama Ports Authority.

Carleton, C., J. Hambrey, K. Wood, and M. Pardee. 2006. Review and Re-Assessment of the TCI Protected Area System. Technical Report for Department of Environment and Coastal Resources, Turks and Caicos Islands Government. pp. 67.

Pardee, M., L. Slade and K.M. Wood. 2005. Development of National Standards and Guidelines for the Conservation and Management of the Natural Resources of the Turks and Caicos Islands. Technical Report for Department of Environmental and Coastal Resources, Turks and Caicos Islands Government. pp.81

Pardee, Marsha 2004. Integrating Aquaculture into Caribbean Development: Part II Environmental Impact Assessments. Proceedings of the 57th Gulf and Caribbean Fisheries Institute, St. Petersburg. Fla.

Pardee Woodring, Marsha. 2001. The TCI experience: pros and cons of developing eco-tourism related activities. Proceedings of the 54th Gulf and Caribbean Fisheries Institute, Turks and Caicos.

Pardee Woodring, Marsha and Anne Boettcher. 2001. Potential for queen conch growout facilities. Proceedings of the 54th Gulf and Caribbean Fisheries Institute, Turks and Caicos.

Harris, Lee E. and Marsha Pardee Woodring. 2001. Artificial reefs for submerged and subaerial habitat protection: protection, mitigation and restoration. Proceedings of the 54th Gulf and Caribbean Fisheries Institute, Turks and Caicos.

Sharp, William C., William A. Lellis, Mark J. Butler, William F. Herrnkind, John. H. Hunt, Marsha Pardee Woodring, and Thomas R. Matthews. 2000. The use of coded microwire tags in mark-recapture studies of juvenile Caribbean spiny lobster (*Panulirus argus*). Journal of Crustacean Biology, 20 (3): 510-521.

Pardee Woodring, M. 1997. Experiences and expectations of mariculture in the Turks and Caicos Islands. Contributions to Martinique 97-Island and Tropical Aquaculture. Abs. pp.225-226.

Lellis, W. A., M. Pardee Woodring and R.L. Creswell. 1997. Prospects for spiny lobster aquaculture in the Caribbean. Contributions to Martinique 97 – Island and Tropical Aquaculture. Abs. pp. 177-178.

Pardee, M. Culture of young spiny lobster (*Panulirus argus*): Effects of density and feed type on growth and survivorship. Master's thesis, Florida Institute of Technology, Melbourne, Florida, USA.

Pardee, M., K. Bird and D. Vaughan. 1989. Field growout and economic analysis of *Mercenaria mercenaria* in the Indian River Lagoon, Florida. J. World Aquaculture Society 20:6A.

Vaughan, D., R.L. Creswell and M. Pardee. 1988. A manual for farming the hard shell clam in Florida. Florida Dept. of Agriculture Aquaculture Market Development Aid Program, Tallahassee, Florida.

Articles

Pardee, M. 2007. The Tale of Mr. T. Times of the Islands Spring 2007. pp39-44.

Pardee, M. 2006. Sands of Grace. Discover Turks and Caicos 2006. pp 68-70.

Pardee, M. 2004. Guardians of the Wild. Times of the Islands. Winter 2003-2004. pp 49-51.

Pardee, M. 2004. Queen of the Caribbean. Discover Turks and Caicos 2004. pp.54-55.

Pardee, M. 2003. Crab a Lil' Attitude. Times of the Islands. Fall 2003. pp.60-68.

Pardee, M. 2003. Fisherman's Day 2003. Times of the Islands. Fall 2003. pp.27-32.

Pardee Woodring, M. 2003. The Timeless Turtle. Discover Turks and Caicos 2003. pp.44-45.

Pardee Woodring, M. 2003. Trailing Along in the Turks and Caicos. Discover Turks and Caicos 2003. pp. 106-107.

Pardee Woodring, M. 2002. Ode to Oceania. Times of the Islands. Summer 2002.pp 42-49.

Pardee Woodring, M. 2002. Sifting through the Sands of Time. Times of the Island. Winter 2002. pp 48-55.

Pardee Woodring, M. 2001. Whale Watching: A new lease on life for the magical mystics of the sea. Times of the Islands. Winter 2001. pp 64-72.

Pardee Woodring, M. The Cameo of the Caicos Cays. Discover Turks and Caicos 2001. pp.46-47.

Pardee Woodring, M. 2001. Treasure or Trash. Times of the Islands. Summer 2001. pp. 26-30.

Pardee Woodring, M. 2000-2001. Reef Relief. Times of the Islands. Winter 2000. pp. 44-50.

Pardee Woodring. M. 2000-2001. True Grits: The Middle Caicos Co-op. Times of the Islands. Winter 2000. Pp 83-87.

Pardee Woodring, M. 1999-2000. A La Natural. Discover Turks and Caicos. Winter/Summer 1999-2000. pp. 90-91.

Pardee Woodring, M. 1998-1999. Crossing Place: A Treasure of a Trail. Times of the Islands. Winter, 1998. pp.34-40.

Pardee Woodring, M. 1997-1998. Beneath the Beyond; Trails of Expectations. Times of the Island. Winter, 1997. pp. 28-35.

Pardee Woodring, M. 1996-1997. Resourcefully Yours, with Respect for the Turks and Caicos Environment. Times of the Islands Magazine. Quarterly column-5 publications.

Pardee Woodring, M. 1996. Boundaries of the Possible: The Little Water Cay Rock Iguana Nature Trail Program. Times of the Islands. Winter, 1996, pp.43-49.

Pardee, M. 1995. Mahi-mahi Aquaculture: From Research to Reality. The Caribbean Aquaculturist 10 (1): 13-16.

Pardee, M. 1994. Lobster Impoundments: Alternative Strategies for Fisheries Management. The Caribbean Aquaculturist 9 (1): 5-8.

Pardee, M. 1987. Shelffish culture big business for New Zealand farm. Austasia Aquaculture 1 (9): 8-9.

Pardee, M. 1987. Golden Bay (New Zealand) scallop enhancement program. Austasia Aquaculture 1 (8): 11.

Pardee, M. 1987. Paua farming research at Mahanga Bay, New Zealand. Austasia Aquaculture 1 (7): 8-9.

Environmental Assessments and Monitoring Projects

- 1. Evaluation of Critical Nursery Habitat for Queen Conch on the Mangrove Cay Shoal. Mangrove Cay Defense Fund. March 2008.
- 2. Turtle Cove Marina English Cut Expansion Marine Biological Assessment. Turtle Cover Marina. October 2007.
- 3. West Sand Spit Biological Survey. Department of Environment and Coastal Resources. October 2007.
- 4. East Grace Bay Beach Nourishment Monitoring Program. Erickson Consulting Engineers. July- September 2007.
- 5. Pelican Point Beach Nourishment Monitoring Program. Erickson Consulting Engineers. May September 2007.
- 6. Environmental Implications for Beaches Resort, Turks and Caicos Artificial Reef Program. Beaches Resort. February 2007.
- 7. Freeport Bahamas Ports Authority Wetland and Marine Assessment. Blue Dolphin Research. November 2006. Ongoing.
- 8. Dellis Cay Beach Nourishment Monitoring Program. Erickson Consulting Engineers. May-December 2006.
- 9. Third Turtle Preliminary Monitoring Assessment and Coral Transplant Program. June-September 2006.
- Dellis Cay Environmental Impact Assessment. Erickson Consulting Engineers. October 2006
- 11. Simmons Blue Hills, Providenciales Preliminary Environmental Scoping Assessment Marine. April 2006.
- 12. Simmons Bonefish Drive, Providenciales, Preliminary Environmental Scoping Assessment- Marine. January 2006.
- 13. Dellis Cay Marine Biological Preliminary Scoping Assessment. Erickson Consulting Engineers. January 2006.
- 14. Cockburn Village and Farm, Grand Turk Environmental Impact Assessment. Greenflash, Ltd. December 2005.
- 15. Gold Rock Creek, Grand Bahamas, Marine Biological Field Assessment. Applied Technology and Management. August, 2005.
- 16. Water Cay Marine Environmental Impact Assessment. Erickson Consulting Engineers. July-August 2005.
- 17. Royal Island, Bahamas Preliminary Scoping Marine Assessment for the EIA Report. Applied Technology and Management (ATM). June-July 2005.
- 18. Development of National Standards and Guidelines for the Conservation and Management of the Natural Resources of the Turks and Caicos Islands. Greenflash, Ltd. March June 2005.
- 19. Third Turtle Environmental Impact Assessment. Erickson Consulting Engineers. May-June 2005.
- 20. Leeward Marina Beach Creation EIA Supplement. CEDA. May 2005.
- 21. Moore's Hall, North Caicos Strategic Environmental Assessment. CEDA. May-June 2005.
- 22. Pelican Point Beach Assessment. Erickson Consulting Engineers. May 2005.
- 23. Emerald Beach Sand Replenishment 6-Month and 1 Year Post Construction Surveys. Erickson Consulting Engineers. March and October 2005.
- 24. Mare Bello Middle Caicos Pre-assessment Study. February 2005.

- 25. Leeward Havens Canal Project Pre-assessment Study. CEDA. December 2004
- 26. Baseline Data Collection for Snorkel Reefs in Princess Alexandra National Park. Annual Reef Monitoring. December 2004.
- 27. Turtle Cove Marina Water Quality Monitoring Program. Training of personnel and sampling for quarterly WQ program. November 2004-ongoing.
- 28. East Grace Bay Beach Sand Replenishment Project Pre-assessment Study. Erickson Consulting Engineers. November 2004.
- 29. Caicos Conch Farm Expansion -GDT. Pre-assesment Study. August- September 2004.
- 30. Sail Rock Estates and Bell Sound Properties. Private marine assessment for property owners. June-August 2004.
- 31. Water Cay Channel Marine Assessment. Erickson Consulting Engineers. June 2004.
- 32. Emerald Beach Sand Replenishment Project. Monitoring and reporting of all phases of construction dredging activity. Erickson Consulting Engineers. April -September 2004.
- 33. La Valle Green Desalinization Plant EIA, St. Kitts. Marine Assessment. Erickson Consulting Engineers. April, 2004.
- 34. Grand Turk Cruise Port Marine Environmental Impact Assessment and Grand Turk Cruiseport South. HallTech. December 2002 and CEDA 2003/2004.
- 35. Beach Oasis Condominium Resort Marine Environmental Impact Assessment. HallTech. July, 2002.
- 36. Baseline Data Collection for Snorkel Reefs in Princess Alexandra National Park. Principal Investigator for two year research study. April 2002-October 2003.
- 37. North Bahamas Estates Ltd. Spiny Lobster Mariculture Project. Environmental
- 38. Impact Assessment. Harbor Branch Oceanographic Institute. December 2001.
- 39. Walkin Marine Dock Project. Assessment of marine and environmental impacts. CEDA. August, 2001.
- 40. West Caicos Strategic Environmental Assessment (SEA). Assessment of marine environment and impacts. HallTech. June, 2001.
- 41. Somerset on Grace Bay. Assessment of marine environment and impacts. CEDA. June, 2001.
- 42. Leeward Gardens Canal, Providenciales. Assessment of marine environmental impacts. HallTech/Leeward, Ltd. October, 2000.
- 43. West Caicos Marina. Assessment of nearshore marine environment and impacts. HallTech, Ltd. October, 2000.
- 44. Leeward Marina Temporary Dock, Providenciales. Assessment of marine environment and impacts. OBM/Leeward Ltd. May, 2000.
- 45. Sandals/Beaches Dock Project, Providenciales. Assessment of marine and coastal environmental impacts. Beaches Resort/CEDA. December 1999.
- 46. HAB Development, Grace Bay, Providenciales. Team Coordinator and marine assessment. Simonwood and Ass. November 1999.
- 47. WACO, Ltd., Turtle Cove, Providenciales. Assessment of marine environment and impacts. CEDA. November 1999.
- 48. Babalua Beach Resort and Villas, Providenciales. Assessment of marine environment and impacts. Somerset Development Ltd. June, 1999.
- 49. Visitor's Center Reef Discovery Site. Environmental impact Assessment. Department of Environmental and Coastal Resources. June, 1999.
- 50. PetroCaicos Project, South Dock, Providenciales. Assessment of marine environment and impacts. Halltech/Petrocaicos. December 1998.
- 51. Grand Turk Harbour, GDT. Assessment of inland aquatic areas and marine environments and impacts. Grand Turk Harbour Development Ltd. April-July, 1998.
- 52. Royal West Indies, Grace Bay, Providenciales. Assessment of marine environment. Simonwood and Ass. July 1998.

- 53. Cooper Jack Marina, Providenciales. Assessment of marine environment and impacts. Simonwood and Ass. December 1997.
- 54. Long Bay Condos, Providenciales. Assessment of marine environment and impacts. Miller and Simons. September 1997.
- 55. ATM Leeward Project, Providenciales. Assessment of marine environment and impacts. ATM. 1996.
- 56. Caicos Conch Farm Expansion, Providenciales. Environmental Impact Assessment of the proposed subsea conch farm pasture on subtidal areas of Providenciales, Turks and Caicos Islands. Trade Wind Industries, Ltd. 1994.
- 57. Point Samson Prawn Project Proposal Environmental Impact Assessment. Kailis and France Pty. Ltd. / Dept. of agriculture, Division of Fisheries, Perth, Western Australia. 1987.

Nature Trail and Conservation Programs

- <u>Little Water Cay Nature Trail Program</u>. Proposal through construction and development stages. Coordination of all activities and training programs. Ongoing management for the following three years. Awarded Condenaste Eco-tourism Finalist Award. October 1995-November 1996.
- 2. <u>Underwater Snorkel Trails</u>. Proposal through development stages. Acquisition of funds through community donors and outside agencies. Coordination and construction of snorkel trail markers and deployment through Broadreach Summer Programs. January-August, 1997.
- 3. <u>Middle Caicos Eco-tourism Project.</u> Proposal through development stages of the Crossing Place Trail. Coordination of all activities for Phase 1 through opening. Ongoing volunteer efforts to expand the program through the Middle Caicos Co-op. October 1997-December 1998.
- 4. <u>Wade's Green Restoration Project</u>. Proposal through development of interpretive elements for the restoration project. May-August 1999.
- Visitor's Center Reef Discovery Site Artificial Reef Project. Proposal, permitting through ongoing development. Coordination with Reef Ball Coalition and Living Classrooms Foundation for participant programs and summer marine ecology programs. June, 1999 and ongoing.
- 6. <u>Turks and Caicos Marine Mammal Conference</u>. Assisted in conference coordination and logistics. March, 2000.
- 7. "Our Land, Our Sea, Our People" Primary level Environmental Education Curriculums.
 Proposal through development stages. Author of all marine related curriculums. April 1998-1999.
- 8. <u>School for Field Studies</u>, Summer, Fall and Spring Programs in Marine Sciences. Resource Management Instructor, South Caicos, 1992-1993.
- 9. <u>Broadreach Programs</u>—Tropical Marine Ecology Courses, TCI, Curriculum and program development, Lead Marine Instructor for courses accredited through Florida Institute of Technology and Mentor College. Summers 1996 and 1997.
- 10. <u>Living Classrooms Foundation and Reefball Coalition</u> –TCI Reef Restoration Programs. Curriculum and program development and marine instruction. Summer 2000. <u>Living Classrooms Foundation</u>-Dominica Discovery Programs. Curriculum development and lead marine instructor. Summer 2001.
- 11. <u>University of Georgia and ReefBall Coalition</u> TCI Reef Restoration Program-program development and lead instructor. March 2002.
- 12. <u>CRMP Junior Park Warden Program</u>. Assisted with program development and marine instructor. Summer 2002.
- 13. <u>Martin County Artificial Reefs Program</u>. Proposal writing to various granting agencies for funding for the MCARP. January 2002, 2003.
- 14. TCSPCA Education Program. Education Committee Coordinator 2002-2003.
- 15. Assessment of Reef Damage from the French Navy Vessel MV Champlain. March, 2003.
- 16. <u>Martin County River Reefs Program</u>. Program development and coordination of artificial reef participant program. 2003
- 17. <u>DECR Junior Park Warden Program</u>. Program development and lead instructor. August 2003.
- 18. <u>Turks and Caicos Lobster Recruitment Study</u>. Coordination and implementation of lobster recruitment study for Providenciales and South Caicos. August 2003 and ongoing.

- 19. <u>ReefBall Reef Rescue and Transplant Project, Maiden Island, Antigua</u>. Assist in propagation and transplant of rescued corals for artificial reef breakwater project. October-November 2003.
- 20. <u>Martin County River Reefs Program</u>. Design and development of mobile unit and all interpretive materials/brochures. January-November. 2004.
- 21. <u>DECR Junior Park Warden Program 2004</u>. Program coordination and training of participants. August 2004.
- 22. <u>ReefBall Post Tsunami Reef Restoration Project Koh Racha, Thailand</u>. Aid in leading volunteer program for post tsunami reef restoration. April 2005.
- 23. <u>Turks and Caicos Sporting Club at Ambergris Cay Naturalist Program</u>. Aid in set-up of TCSC initial programming. March-January 2005.
- 24. <u>Cockburn Village and Farms Grand Turk "Conch World" Project</u>. Coordination of design and development of interpretive elements for the Conch World facilities. January 2006-Ongoing.
- 25. <u>Turks and Caicos Sand Mining Study</u>. Biological Assessment of potential sand mining sites throughout the Turks and Caicos. Technical Report. April-November 2007.
- 26. <u>Beaches Artificial Reefs Program</u>. Project Coordination and Coral Transplant Team. September 2007-Ongoing.
- 27. <u>Development of Montserrat Marine National Park</u>. Aid in development of Marine Park for Montserrat. Technical Report. November 2007-January 2008.