

## CURRICULUM VITAE

### **Ernesto Francisco Weil Machado**

**Place and Date of Birth:** Caracas, Venezuela - August 29, 1954. **Nationality:** US Citizen / Venezuelan

**Work:** Dept. of Marine Sciences, University of Puerto Rico. PO BOX 9000 Mayaguez PR 00681.

**Position: Professor / Researcher - E-mail:** [reefpal@gmail.com](mailto:reefpal@gmail.com) / [ernesto.weil@uprm.edu](mailto:ernesto.weil@uprm.edu)

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### EDUCATION

1994-1996. Postdoctoral Associate - RSMAS - U. of Miami. (Alina Szmant's laboratory).

1992. Ph.D. Department of Zoology, University of Texas at Austin, TX, USA and Smithsonian Tropical Research Institute, Panama (Judy Lang, David Hillis and Nancy Knowlton).

1980. Licenciado in Biology, Facultad de Ciencias, Universidad Central de Venezuela (Freddy Losada).

### OTHER TRAINING

Scientific Scuba diver (1979-NAUI-CMAS) - CPR-First Aid (Red-Cross, UM, 1994-1996)  
Coastal Navigation (US coast guard) - Nitrox diving (NOAA-Key Largo, 1996)

### EMPLOYMENT

2004- Full Professor, Dept. Of Marine Sciences, University of Puerto Rico  
1999-04 Associate Professor, Dept. Of Marine Sciences, University of Puerto Rico  
1996-99 Assistant Professor, Dept. Of Marine Sciences, University of Puerto Rico  
1994-96 Research Associate, University of Miami. RSMAS-MBF  
1993-94 Instructor, Department of Biology, Austin Community College, Austin Texas.  
1992-93 Lecturer, Dept. of Zoology, University of Texas. Austin, Texas.  
1986-90 Research associate in the project "Effects of a Major Oil Spill on Panamanian coastal communities". Coral Reef section. Smithsonian Tropical Research Institute (1986-1990).  
1985-86 Research Assistant to Dr. Jeremy Jackson, Smithsonian Trop. Research Institute, Panama.  
1979-85 Director of the Dos Mosquises Marine Biology Station, Fund. Científica Los Roques, Caracas, Venezuela.

### TEACHING EXPERIENCE

2004- DCM-U. of Puerto Rico- Graduate courses in coral reef biology, ecology and biogeography  
1999-01 Summer course in Coastal Pathology - Bermuda Biology Station for Research  
1999 Summer course in coral reef biology and biogeography - Dos Mosquises Marine Biology Station, Los Roques, Venezuela

1996-02	DCM-U. of Puerto Rico- Graduate courses in coral reef biology, ecology and biogeography.
1993-94	Austin Community College. Instructor in environmental biology - cell biology
1992-93	University of Texas. Ecology. Lecturer in evolution and society.
1987-92	University of Texas. Cell and organism biology, human physiology, human genetics.
1981-89	Fundación Científica Los Roques. Professor and coordinator of advanced summer courses at the Dos Mosquises Marine Biology Station, Los Roques, Venezuela. Coral Reef Biology, Ichthyology, ecology and evolution of coral reefs, etc.
1975-80	Universidad Central de Venezuela. Teaching assistant and Assistant Instructor in biometry, marine ecology (1980), problems in marine ecology.

### **CURRENT RESEARCH INTERESTS**

- Characterization and understanding of immune genes via Transcriptome characterization of cnidarian genomes.
- Immune responses of cnidarians and adaptability to climate change conditions
- Spatial and temporal variability in the distribution, prevalence and impact of coral reef diseases in the Caribbean and Indo-Pacific. Climate change environmental correlates.
- Degradation trends in Caribbean and Indo-Pacific coral reef communities. The role of Climate Change
- Reproductive Biology and ecology of Caribbean corals
- Taxonomy, biodiversity, systematics, ecology, and evolution of Caribbean reef corals.
- Community and population ecology, anthropogenic impacts, management and conservation of Caribbean coral reefs and other tropical marine communities

### **SYNERGISTIC ACTIVITIES**

- Global and Regional Environmental Issues in Coastal Marine and Land Ecosystems – Environmental Leaders Program (ELSU) University of Shizuoka, Shizuoka, Japan. Participation as invited Professor to a workshop at the University of Shizuoka (September 23-28, 2013) and at the 3<sup>rd</sup> Asian Pacific Coral Reef Symposium, in Taiwan, June 22-28, 2014. The goal was to advice, teach students (future leaders in research) from the Asia region on the current problems of coral diseases and marine diseases in general and how to tackle them and make a contribution in their countries.
- Collaborator in the Coral Disease Research project (Cornell-NOAA) on the “Role of Environmental Conditions in Driving Spatial and Temporal Variation in Disease Prevalence” (2014- ) and member of the Disease Research Coordination Network (Cornell University) dealing with existing and new diagnostic techniques to expanding tools to ID new pathosystems and identify key laboratories to serve as diagnostic development centers (2014- ).
- Invited expert to help on an EPA project to develop a reef classification system for use by Federal Agencies in the evaluation of Biological Condition Gradients (BCG) for Caribbean coral reefs September 2013 – present.
- Faculty Development program of Department of Biology, University of Puerto Rico –Program to enhance and complement Faculty members' and current students' knowledge and understanding of the current status and problems affecting Puerto Rico's and Caribbean coral reefs and other coastal

- communities. February 2014 -
- Executive Board Member of the Association of Marine Laboratories of the Caribbean (AMLC). A network program of Marine Laboratories that dedicates to promote marine sciences and helps researchers and students from the Caribbean.
  - Development of databases on Caribbean coral reef diseases and environmental drivers.
- OTHER ACTIVITIES**
- Editor of the Caribbean Marine Science Newsletter of the AMLC (1999 – 2012).
  - Vice-President of the Association of Marine Laboratories of the Caribbean (2001- 2009)
  - Guess Editor of the special volume of Diseases of Aquatic Organisms “Current Advances in Coral Reef Disease Research”. Vol. 69 Number 1. (2006).
  - Chair and lead convener of the “Diseases of Coral Reef Organisms; Evolutionary Aspects” at the 10<sup>th</sup> International Coral reef Symposium, Okinawa, Japan (2004).
  - President Association of Marine Laboratories of the Caribbean (2000-2001)
  - Director of the CARICOMP chapter for Puerto Rico (1997 - 2012)
  - CESU representative for the University of Puerto Rico (1999-2005)
  - Book reviews: Marine Biology by Castro and Huber, MacGraw Hill, 468 pp. 1-4 editions (1999-2002).
  - Peer-reviewer for several journals (Coral Reefs, DAO, MEPS, Marine Biology, JEMBE, PLOS-One, Biological Bulletin, Bulletin Marine Science, Revista Biología Tropical, Phyl. Trans. B, etc.).

**MEMBERSHIPS**

- International Society for Reef Studies (1991- )
- American Museum of Natural History (1992 – 2005)
- Association of Marine Laboratories of the Caribbean (1999- )
- National Geographic (1997- ).

**GRANTS - HONORS**

- 2010- 11- NSF-Grant. Collaborative Research: Impacts of the 2010 Caribbean Coral Bleaching Event: Assessing changes in Coral Immune Function. CoPI with D. Harvell (Cornell University) and L. Mydlarz (UT-Arlington). (\$ 28.100).
- 2010-13 - NSF grant Collaborative Research: Assessing the Effect of Environmental Stressors on Invertebrate Innate Immunity Using a Coral Pathosystem. CoPI with Laura Mydlarz (UT Arlington and JW Bruno, U, of North Carolina. (\$ 143.600).
- 2007-11- NOAA- CCRI- Microbiological and etiological responses in *Montastraea faveolata* infected with Caribbean yellow band disease (YBD) to rising ocean temperature and nutrient pollution (\$ 26,253).

2007-10- NOAA-DEEP CRES - Ecology, Integrity and Status of Deep Caribbean Coral Reefs. NOAA (\$ 1,500.000) Co-PI with 5 others

2005-09- Ocean warming, environmental impact and coral diseases: A Global disease assessment. Coral Reef Targeted Research GEF-World Bank (\$ 130.000).

2002-07- NOAA-CRES - Integrating Science and management in the Caribbean - (\$ 5,000,000) Co-Pi with 5 other Co-PIs.

2005-06- Status and impact of coral diseases around Puerto Rico. NOAA-DNR (\$ 75,000).

2002-03- Fish and Wildlife Foundation - Reproductive biology, recruitment and culture of corals as tools for restoration and management of reefs (\$132.000).

1999-02- UN-Diversitas program - Caribbean-wide surveys of disease incidence in coral reefs. (\$ 25,000)

2000-02- Colciencias - Colombia. Taxonomia del complejo de esponjas escavadoras de coral *Cliona aprica*, *C. langae* y *C. caribbaea* y su impacto sobre algunos arrecifes del Caribe Colombiano.

2000-01- NASA - Coral reef Monitoring by Remote Sensing of Coral Spawn (\$ 5,000)

1999-01- SeaGrant Grant for research in reproductive biology of Caribbean Corals (\$ 145.000)

1998-99- SeaGrant Grant for studies in the *Cliona* spp. impact on Caribbean reefs (\$ 9,000).

1998-99- Seed Money Grant from School of Art and Sciences - RUM – UPR (\$ 3,000)

1997-98- Seed Money Grant from School of Art and Sciences - RUM – UPR (\$ 3,000)

1996-97- Seed Money Grant from CID - RUM – UPR (\$ 3,000)

1996-97- Seed Money Grant from Sea Grant - RUM – UPR (\$ 3,000)

1994-96- Postdoctoral associate. RSMAS, University of Miami.

1991- Short term fellowship, Smithsonian Tropical Research Institute, Panama. (\$ 6,000)

1989-90- Pre-doctoral fellowship. Smithsonian Institute, Washington DC. (\$ 25,000)

1986-88- PRA Scholarship from the Organization of the American States (OAS)

1985- Research Assistant Fellowship, Exxon Co. and The Smithsonian Trop. Research Institute.

1984- Order Andrés Bello in its Third Class, Presidency of the Republic of Venezuela.

1979-80- Research Grant from CONICIT, Thesis project.

1978-79- Research Assistant Fellowship, Instituto Venezolano de Inv. Cientificas, Venezuela.

### **Mentored / Supervised Graduate Students**

#### **Masters (29/15)**

Robbin Bruckner – Ms.C- 1999  
Wilma Vargas – MsC – 2002  
Jorge Pinzón – Ms.C – 2004  
Miguel Lugo – Ms.C – 2004  
Hector Ruiz – Ms.C – 2004  
Emmanuel Irizarry – Ms.C – 2006  
Jose Morales – Ms.C – 2006  
Carlos Prada - Ms.C - 2007  
Alex Mercado – Ms.C – 2007

#### **Ph.D (12/7)**

Andrew Bruckner – Ph.D -1999  
Antonio Ortiz - Ph.D - 2005  
Juan Torres – Ph.D - 2005  
Aldo Croquer – USB-Venezuela -Ph.D – 2005  
Daisy Duran – Ph.D – 2005  
Sean Griffin- Ph.D - 2005  
Jan Locke – Ph.D - 2009  
Courtney Couch – Cornell – University- Ph.D – 2013  
Mohammed Suleiman – U. Tanzania- Ph.D – 2016

Joselyd Garcia – Ms.C – 2007  
Kathy Flynn – Ms.C – 2008  
R. Hernandez – Ms.C - 2008  
Danise Ruiz – Ms.C - 2009  
Rocio Garcia – Ms.C – 2009  
Francisco Soto – Ms.C - 2011  
Derek Soto – Ms.C – 2013  
Chatchanit Arif – Ms.C – King Abdullah University  
Duane Sanabria – Ms.C - 2014  
Luis Rodriguez – Ms.C - 2014  
Francisco Perez (USB-Venezuela) 2015.  
Christina Wade – Ms.C - 2015  
Ingrid Ortiz – Ms.C - 2016  
Hanae Spathias – Ms.C – 2016  
Mariel Cruz – Ms.C - 2016  
Nick Hammerman – Ms.C - 2016  
Liahay Rivera – Ms.C - 2017  
Thay-Ling Moya – Ms.C - 2017  
Jeffrey Morales – Ms.C - 2017  
Miguel Figuerola – Ms.C - 2017

Matt Lucas – Ph.D – 2016  
Allison Tracy – Cornell University Ph.D -2017  
Chelsea Ham – Ph.D – 2016.

#### **Post Doctoral Advising (1)**

Aldo Croquer – USB - Venezuela

#### **External Reviewer of PhD Dissertations for:**

Cathie Page - University of Queensland - Australia  
Steve Dalton - University of New England, Armidale, NSW, Australia

#### **COLLABORATORS**

Drs. D. Anderson, R Appeldoorn, D Ballantine, R Beeden, D Bone, AF Budd, J Bruno, A Bruckner, C. Burge; J Cortes, A Croquer, B Casareto, K Carpenter, K Coates, M Eakin, NL Foster, J Garzón-Ferreira, D Gil-Agudelo, R Ginsburg, M Groner, HM Guzmán, D Harvell, A Hooten, S Heron, A Irikawa, JBC Jackson, E Jordan-Dalhgreen, S Kahn, N Knowlton, J Lang, M Lucas, D Lirman, S Manuel, J. Maynard, T McClanahan, M Medina, M Miller, P Miloslavich, M Morgan, P Morris, P Mumby, L Mydlarz, FL Nuñez, CA Page, JM. Pandolfi, J Pinzón, L Raymundo, L Richardson, K Ritchie, C Roder, C Rogers, E Rosenberg, M Ruiz-Ramos, GW Smith, C Sherman, N Schyzas, Soto D, Soto-Santiago F, S Sunagawa, A Szmant, Y Suzuki; A Tracy, I Urreiztieta, van Tussenbroek BI, CR Voolstra, B Willis, W Wright, A Winter, T Work, P Yoshioka and S Zea.

#### **PUBLICATIONS**

#### **PEER-REVIEWED**

- 94- Anderson D, Weeb M, Tonellato P, Smith MC, **Weil E (2016)**. *RNA-Seq to expand models of innate immunity in the Caribbean reef-building coral Orbicella faveolata (Scleractinia-Merulinidae)* PeerJ – DOI [10.7717/peerj.1616](https://doi.org/10.7717/peerj.1616)
- 93- Groner M, Maynard J, Breyta R, Carnegie B, Dobson A, Friedman CS, Froelich B, Garren M, Gulland FMD, Heron SF, Noble RT, Revie CW, Shields JD, Vanderstichel R, Weil E, Wyllie-Echeverria S, Harvell CD (2016). *Managing Marine Disease Emergencies in an Era of Rapid Change*. Phil. Trans. R. Soc. B 371:20150364. <http://dx.doi.org/10.1098/rstb.2015.0364>
- 92- Appeldoorn R, Ballantine D, Bejarano I, Carlo M, Nemeth M, Otero E, Pagan F, Ruiz H, Schizas N, Sherman, **Weil E (2015)**. *Mesophotic coral ecosystems under anthropogenic stress: a case study at Ponce, Puerto Rico*. Coral Reefs. DOI [10.1007/s00338-015-1360-5](https://doi.org/10.1007/s00338-015-1360-5)
- 91- Soto DA and Weil E (2016). *Sexual Reproduction in the Caribbean Coral Genus Isophyllia (Scleractinia: Mussidae) in Puerto Rico*. PeerJ (In review).
- 90- Morgan Michael M, Goodner K, Ross J, Poole A, Stepp E, Stuart C, Wilbanks C, **Weil E (2015)**. Development and application of molecular biomarkers for characterizing Caribbean Yellow Band Disease in *Orbicella faveolata*. PeerJ - 3:e1371; DOI [10.7717/peerj.1371](https://doi.org/10.7717/peerj.1371)
- 89- Lucas M and **Weil E. (2015)**. Recent recovery in *Acropora cervicornis* and abundance of *A. prolifera* off La Parguera, PR. Mar. Biod. Oceanarium - (DOI: [10.1007/s12526-015-0399-4](https://doi.org/10.1007/s12526-015-0399-4)).
- 88- Daniels CA, Baumgarten S, Yum LK, Michell CT, Bayer T, Arif C, Roder C, Weil E and Voolstra CR (2015). *Metatranscriptome analysis of the reef-building coral Orbicella faveolata indicates holobiont response to coral disease*. Front. Mar. Sci. 2:62. doi: [10.3389/fmars.2015.00062](https://doi.org/10.3389/fmars.2015.00062)
- 87- Groner M, Breyta R, Dobson A, Friedmann C, Froelich B, Garren M, Gullard F, Maynar J, **Weil E, Wyllie-Echeverria S, Harvell D (2015)**. *Emergency responses for Marine Diseases Science*. Vol. 347, Issue 6227. p.1210.
- 86- Tracy A, Koren O, Douglas N, **Weil E, Harvell D (2015)**. *Persistent Shifts in Caribbean Coral Microbiota are Linked to the 2010 Warm Thermal Anomaly*. doi: **Environmental Microbiology Reports**. DOI-[10.1111/1758-2229.12274](https://doi.org/10.1111/1758-2229.12274)
- 85- Maynard J, van Hooidonk R, Eakin MC, Puotinen M, Heron SF, Garren M, Lamb J, Williams G, **Weil E, Willis B, Harvell CD (2015)**. *Climate projections of conditions that increase coral disease susceptibility and pathogen virulence*. Nature Climate. **Nature Climate Change DOI: 10.1038/NCLIMATE2625**
- 84- Pinzón JH, Kamel B, Burge CA, Harvell CD, Medina M, **Weil E, Mydlarz L (2015)**. *Whole transcriptome analysis reveals changes in expression of immune-related genes during and after bleaching in a reef-building coral*. R. Soc. Open Sci. 2: 140214. <http://dx.doi.org/10.1098/rsos.140214>.
- 83- Pinzon J, Dornberger I, Beach-Letendre j, **Weil E and Mydlarz L (2014)**. *The link between immunity and life history traits in scleractinian corals*. PeerJ 2:e628; DOI [10.7717/peerj.628](https://doi.org/10.7717/peerj.628).
- 82- Soto-Santiago F and Weil E (2015). Spatial and temporal variability of Caribbean yellow band disease prevalence in *Orbicella* spp. off La Parguera, Puerto Rico. Carib J Scie, Vol. 48 (1)- 81-102.
- 81- Lucas M, Rodriguez L, Sanabria D, **Weil E (2014)**. *Natural Prey Preferences and Spatial Variability of*

- Predation Pressure by Cyphoma gibbosum (Mollusca: Gastropoda) on Octocoral Communities off La Parguera, Puerto Rico.* ISRN Ecology- Article ID 742387, 13 pags. DOI.org/10.1155/2014/ 742387
- 80- Pinzon JE, Beach-Letendre J, **Weil E**, Mydlarz L. (2014). Relationship between phylogeny and immunity suggests older Caribbean coral lineages are more resistant to disease. *PLoS ONE* 9(8): e104787. doi:10.1371/journal.pone.0104787
- 79- van Tussenbroek BI, Cortés J, Collin R, Fonseca AC, Gayle PMH, Guzmán HC, Jácome, Juman R, Koltes , Oxenford HA, Rodríguez Ramirez A, Samper-Villareal J, Smith SR, Tscherk JJ, **Weil E** (2014). *Caribbean-Wide, Long-Term Study of Seagrass Beds Reveals Local Variations, Shifts in Community Structure and Occasional Collapse.* *PLoS ONE* 9(3): e90600.
- 78- Ruiz Ramos D, **Weil E**, Schyzas N (2014) *Morphological and genetic evaluation of the hydrocoral Millepora species complex in the Caribbean.* *Zoological Studies* 53(4):1-15.
- 77- Burge CA; Eakin CM, Friedman CS, Froelich B, Hershberger PK, Hofmann EF, Petes LE, Prager KC, **Weil E**, Willis BL, Ford SE and Harvell CW (2014). *Climate Change Influences on Marine Infectious Diseases: Implications for Management and Society.* *Annu. Rev. Mar. Sci.* Vol.6: 249-277.
- 76- Roder C, Arif C, Daniels C, **Weil E**, Volstra CR (2014). *Profiling of White Plague Disease across corals and oceans indicates a conserved and distinct disease microbiome.* *Mol. Ecol.* 23: 965–974.
- 75- Sherman C, Appeldoorn R, Ballantine D, Bejarano I, Carlo M, Kesling D, Nemeth M, Pagan F, Ruiz H, Schizas N and **Weil E**. (2013). *Exploring the mesophotic zone: Diving operations and scientific highlights of three research cruises (2010-2012) across Puerto Rico and US Virgin Islands.* *Proceedings of the AAUS Symposium Proceedings, Curacao, 2013.*
- 74- Anderson D, Armstrong R & **Weil E** (2013). *Hyperspectral remote sensing detects spectral changes in corals affected by climate-driven disease stress – perspectives for the field of coral disease diagnostics.* *PLoS –Vol. 8. Issue 12- e81478.*
- 73- Kimes NE, Johnson WR, Torralba M, Nelson KE, **Weil E** and Morris PJ (2013). *The Montastraea faveolata microbiome: ecological and temporal influences on a Caribbean reef-building coral in decline.* *Environmental Microbiology* doi:10.1111/1462-2920.12130.
- 72- Couch CS, **Weil E**, Harvell CD (2013). *Temporal Dynamics and Plasticity in the Cellular Immune Response of the Sea Fan Coral, Gorgonia ventalina.* *Mar. Biol.* (DOI 10.1007/s00227-013- 2240-6).
- 71- **Weil E**, Casareto B, Irikawa A and Suzuki Y (2012). *Extended geographic distribution of several Indo-Pacific coral reef diseases.* *Dis Aquat Org.* Vol. 98: 163–170.
- 70- Ruiz-Moreno D, Willis BL, Page AC, **Weil E**, Croquer A, Vargas-Angel B, Jordan-Garza AG, Jordán-Dahlgren E, Raymundo L, Harvell C.D (2012). *Global Coral Disease Prevalence Associated with Sea Temperature Anomalies and Local Factors.* *DAO* Vol. 100: 249–261.
- 69- Soto F and **Weil E** (2012). Incidence and spatial dispersion of Caribbean Yellow Band Disease in La Parguera, Puerto Rico *Jour Mar Biol*, Vol. 1, 1-8, ID 510962. doi:10.1155/2012/51096.
- 68- Budd AF, Nunes F, **Weil E**, Pandolfi J (2012). *Polymorphism in a common Atlantic reef coral (Montastraea cavernosa) and its long-term evolutionary implications.* *Evol. Ecol.* Vol 26 (2): 265-290. DOI 10.1007/s10682-010-9460-8
- 67- Foster NL, Paris CB, Kool JT, Baums IB, Stevens JR, Sanchez JA, Bastidas C, Agudelo C, Bush P, Day

- O, Ferrari R, Gonzalez P, Gore S, Guppy R, McCartney M, McCoy C, Mendes J, Srinivasan A, teiner S, Vermeij MJA, **Weil E**, Mumby PJ (2012). *Connectivity of Caribbean coral populations: Complementary insights from empirical and modelled gene flow.* **Molecular Ecology** doi: **10.1111/j.1365-294X.2012.05455.**
- 66- Burge CA, Douglas N, Conti-Jerpe I, **Weil E**, Roberts S, Friedman CS, Harvell CD (2012). *Friend or foe: the association of Labyrinthulomycetes with the Caribbean sea fan, Gorgonia ventalina.* **DAO Vol. 101: 1–12, 2012.**
- 65- Pinzón J and **E Weil** (2011). *Cryptic species in the Atlantic-Caribbean scleractinian genus Meandrina: A multi-variable review of the taxonomy and description of the new species Meandrina jacksoni n sp.* **Bull.Mar.Sci. Vol 87(4): 823-853.**
- 64- **Weil E** and W Vargas (2010). *Comparative aspects of sexual reproduction in the Caribbean coral genus Diploria* (Scleractinia: Faviidae) **Mar. Biol. 137(2):413-426.**
- 63- Eakin CM, Morgan JA, Heron SF, Smith TB, Liu G, **Weil E**, et al. (2010) *Caribbean Corals in Crisis: Record Thermal Stress, Bleaching, and Mortality in 2005.* **PLoS ONE 5(11): e13969.** doi:**10.1371/journal.pone.0013969**
- 62- Miloslavich P, Díaz JM, Klein E, Alvarado JJ, Díaz C, Gobin J, Escobar- Briones E, Cruz JJ, **Weil E**, Cortés J, Bastidas CA, Robertson DR, Zapata FA, Martín A, Castillo J, Kazandjian A, Ortiz, M (2010). *Marine Biodiversity in the Caribbean: regional estimates and distribution patterns.* **PLoS ONE, 5 (8): e11916.** doi: **10.1371/journal.pone.0011916**
- 61- Kahn SE, Garcia-Sais JR, Spalding HL, Brocovich E, Wagner D, **Weil E**, Hinderstein I, Toonen RJ (2010). *Community ecology of mesophotic coral reef ecosystems.* **Coral Reefs 29:255-275.**
- 60- Sherman C, Nemeth M, Ruiz H, Bajarano I, Appeldoorn R, Pagán F, Scharer M and **Weil E** (2010). Geomorphology and mesophotic coral ecosystems of the upper insular slope of southwest Puerto **Coral Reefs 29:347-360.**
- 59- Vizcaino ML, WE Johnson, NE Kimes, K Williams, M Torralba, KE Nelson, GW Smith, **E Weil**, PDR Moeller and PJ Morris (2010). *Vibrio corallilyticus* strains and Caribbean sister phylotypes 1 isolated from a diseased octocoral exhibit high antimicrobial resistance. **Soc. Appl. Microb.**
- 58- Kimes NE, JD Van Nostrand, **E Weil**, J Zhou and PJ Morris (2010). Microbial functional structure of *Montastraea faveolata*, an important Caribbean reef-building coral, differs between healthy and Caribbean yellow-band diseased colonies. **Envir. Microb. doi:10.1111/j.1462-2920.2009.02113.x**
- 57- **Weil E**, Croquer A and Urreiztieta I (2009a). *Temporal variability and consequences of coral diseases and bleaching in La Parguera, Puerto Rico from 2003-2007.* **Carib. J Sci Vol 45, N° 2-3:221-246.**
- 56- **Weil E**, Cróquer A and Urreiztieta I (2009b). *Yellow band disease compromises the reproductive output of the reef-building coral Montastraea faveolata (Anthozoa, Scleractinia).* **Dis Aquat Org. Vol. 87: 45-55.**
- 55- **Weil E**, KB Ritchie, A Croquer, JR Cunning, and GW Smith (2009). *Inoculation of Vibrio spp. onto Montastraea faveolata fragments to determine potential pathogenicity* (2009) **Proc. 11<sup>th</sup> Int. Coral Reef Sym. Ft. Lauderdale. USA. 202-205.**
- 54- **Weil E** and A Croquer (2009). *Local and Geographic variability in distribution and prevalence of coral and octocoral diseases in the Caribbean I: Community-level analysis.* **Dis Aquat Org, Vol**

**83:195–208.**

- 53- Flynn K and **Weil E** (2009). *Variability of Aspergillosis in Gorgonia ventalina in La Parguera, Puerto Rico*. **Carib. J Sci Vol 45, N° 2-3: 215-220.**
- 52- Irizarry E and **Weil E** (2009). *Spatial variability in survivorship of juvenile corals in La Parguera, southwestern Puerto Rico* **Carib. J Sci Vol 45, N° 2-3: 269-281.**
- 51- Croquer A and **Weil E** 2009a. *Local and geographic variability in distribution and prevalence of coral and octocoral diseases in the Caribbean II: Genera-level analysis*. **Dis Aqua Org Vol. 83: 209–223.**
- 50- Cróquer A and **E. Weil** (2009b). *Changes in Caribbean coral disease prevalence after the 2005 bleaching event*. **Dis. Aquat. Org. Vol. 87: 33-43.**
- 49- Prada C, **Weil E** and Yoshioka P (2009). *Octocoral bleaching under unusual thermal stress*. **Coral Reefs DOI 10.1007/s00338-009-0547-z.**
- 48- Hernández R, Sherman C, **Weil E**, and Yoshioka P (2009), Spatial and temporal patterns in reef sediment accumulation and composition, southwestern shelf of Puerto Rico. **Carib Jou Sci. Vol. 45, No. 2-3, 138-150.**
- 47- Mydlarz LD, Couch CS, **Weil E**, Smith GW and Harvell CD (2009). *Immune defenses of healthy, bleached and diseased Montastraea faveolata during a natural bleaching event*. **Dis Aqua Org. Vol 87:67-71.**
- 46- Cunning JR, Thurmond JB, Smith GW, **Weil E**, and Ritchie KB (2009). *A survey of vibrios associated with healthy and Yellow Band Diseased Montastraea faveolata*. **Proc. 11<sup>th</sup> Int. Coral Reef Sym. Ft. Lauderdale, USA: 206-210.**
- 45- Zimmer, B., Duncan, L., Aronson, R.B., Deslarzes, K.J.P., Deis, D., Robbart, M., Precht, W.F., Kaufman, L., Shank, B., Weil, E., Field, J., Evans, D.J. and Whaylen, L. (2010). Long-term monitoring at the East and West Flower Garden Banks, 2004-2008. Volume I: Technical report. U.S. Department of the Interior, Bureau of Ocean Energy Management, Regulation, and Enforcement, Gulf of Mexico OCS Region, New Orleans, Louisiana. OCS Study BOEMRE 2010-052. 310 p.
- 44- Harvell CD, Altizer S, Cattadori IM, Harrington L, and **Weil E** (2009). *Climate Change and Wildlife Diseases: When Does the Host Matter the Most?* **Ecology, 90(4), 2009, pp. 912–920.**
- 43- Vu I, Smelick G, Harris S, Lee SC, **Weil E**, Whitehead RF and Bruno J. (2009). *Macro algae has no effect on the severity and dynamics of Caribbean yellow band disease*. **PLoS ONE 4(2): e4514.** doi:10.1371/journal.pone.0004514.
- 42- McClanahan TR, **Weil E**, Maina J and Lohr J (2009). *Strong relationship between coral bleaching and “tumors” in massive Porites*. **Global Change Biology 15: 1804-1816**
- 41- Sunagawa S, DeSantis TZ, Piceno YM, Brodie EL, DeSalvo MK, Voolstra CR, **Weil E**, Andersen GL and Medina M (2009). *Bacterial diversity and white plague disease-associated community changes in the Caribbean coral Montastraea faveolata assessed by 16S rRNA microarray analysis and clone library sequencing*. **The ISME Journal: 1-10.**
- 40- Carpenter K, Livingston S ... **Weil E** (33 authors) (2008). *One third of reef-building corals face elevated extinction risk from climate change and local impacts*. **Science. Vol.321, pp560-563.**
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- 33- **Weil E** (2006). *Coral, octocoral and sponge diversity in the reefs of the Jaragua National Park, Dominican Republic.* **Rev. Biol. Trop.** **Vol. 54 (2):** **423-443.**
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- 29- Croquer A, **E Weil**, AL Zubillaga and SM Pauls (2005). *Impact of an outbreak of white plague II on A coral reef in the Archipelago Los Roques National Park, Venezuela .* **Carib. J. Scie.** **Vol. 41 (4):815-823.**
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- 27- Ballantine D, **Weil E** and Ruiz H (2005). *Coralline White Band Syndrome , a coralline algal affliction in the Tropical Atlantic.* **Coral Reefs** **24.** **117.**
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- of acroporid (scleractinia) coral populations in Puerto Rico. Proc. of the Caribbean Workshop: Potential Application of the US Endangered Species Act (ESA) as a Conservation Strategy. NOAA-NMFS and NCORE – RSMAS. U. of Miami. April 16 - 18. Pp. 71-92.*
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- 10- Weil E (1992b). *Genetic and morphological variation in Porites (Cnidaria, Anthozoa) across the isthmus of Panama. PhD Dissertation, University of Texas, 238 pp.*

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- 2- Flynn K and **Weil E** (201\_) *Dynamics of aspergillosis lesions affecting Gorgonia ventalina colonies in La Parguera, Puerto Rico*. **JEMBE**.

### BOOK CHAPTERS

- 15- Page CA, Croquer A, Bastidas C, Rodríguez S, Neale SJ, **Weil E** and Willis BL (2016). Halofolliculina ciliate infections on corals. In **Diseases of Coral, First Edition**. Edited by Cheryl M. Woodley, Craig A. Downs, Andrew W. Bruckner, James W. Porter and Sylvia B. Galloway. Chapter 26, pp 361-375. John Wiley & Sons, Inc
- 14- Work T and **Weil E** (2016). *Dark Spots Disease (Endolithic hypermycosis)*. In **Diseases of Coral, First Edition**. Edited by Cheryl M. Woodley, Craig A. Downs, Andrew W. Bruckner, James W. Porter and Sylvia B. Galloway. Chapter 25, pp. 354 – 360. John Wiley & Sons, Inc  
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- 12- Smith SR, Sarkis S, Murdoch TJT, Weil E, Croquer A , Bates NB , Johnson RJ , de Putron S, Andersson AJ (2013). *Threats to coral reefs in Bermuda*. In C.R.C. Sheppard (ed.), *Coral Reefs of the United Kingdom Overseas Territories*, Coral Reefs of the World 4, 17 DOI 10.1007/978-94-007-5965-7\_13, © Springer Science+Business Media Dordrecht
- 11- Weil E and Rogers CS (2011). *Coral Reef disease in the Atlantic-Caribbean*. In Z. Dubinski and N. Stambler Eds. **Coral Reefs: An Ecosystem in Transition Chapter 27. Pp. 465-492.** Springer-Verlag.
- 10- McClanahan, TR, Weil E, Cortés J, Baird A and Ateweberhan M (2009). *Consequences of coral bleaching for sessile organisms*. In M. van Oppen and J. Lough (editors) *Coral Bleaching: Patterns, Processes, Causes and Consequences. Ecological Studies. Pp:121-138*. Springer-Verlag
- 9- Weil E, Jordan-Dalhgreen E, Bruckner AW and Raymundo LJ 2008. *Assessment and monitoring protocols of coral reef diseases*. In Raymundo L, Couch CS, and Harvell D (Edits), *Coral Disease Handbook:guidelines for Assessment, Monitoring and Management*. GEF-CRTR- Currie Communications Australia. pp 48-64.
- 8- Ballantine D, Appeldoorn R, Yoshioka P, Weil E, Armstrong R, Garcia J, Otero E, Pagan F, Sherman C, Hernandez-Delgado E, 2008. *Biology and Ecology of Puerto Rican Coral Reefs*. In: Riegl BM, Dodge RE (eds) **Coral Reefs of the USA. Springer, pp 375-406**
- 7- García-Sais J, Appeldoorn R, Battista T, Bauer L, Bruckner A, Caldow A, Carrubba L, Corredor J, Diaz E, Lilyestrom C, García-Moliner G, Hernández-Delgado E, Menza C, Morell J, Pait A , Sabater J, Weil E, Williams E and Williams S 2008. *The State of Coral Reef Ecosystems in Puerto Rico*. In: Wadell JE and Clarke AM (eds) *The State of Coral Reef Ecosystems of the United States and Pacific Freely Associated States*. NOAA Technical Memorandum NOS NCCOS 73. Pp 75-116.
- 6- Weil E 2005. *Current Status of the Marine Biodiversity of Puerto Rico*. In P. Miloslavich and E. Klein (Ed.). Caribbean Marine Biodiversity: The known and unknown. **DEStech Publications Inc. Lancaster, PA USA Pages 85-109**
- 5- Weil E 2004. *Coral Reef Diseases in the Wider Caribbean*. In E. Rosemberg and Y. Loya (Eds.) **Coral reef health and diseases. Pp. 35-68. Springer-Verlag**.
- 4- Gil-Agudelo D, G Smith, J Garzón-Ferreira, E Weil and D Petersen, 2004. *Dark spots disease and yellow band disease, two poorly known coral diseases with high incidence in Caribbean reefs*. In E. Rosemberg and Y. Loya (Eds.) **Coral reef health and diseases. Pp. 337-348. Springer-Verlag**.
- 3- Smith G and E Weil 2004. *Aspergillosis in Gorgonians*. In E. Rosemberg and Y. Loya (Eds.) **Coral reef health and diseases. Pp. 279-286. Springer-Verlag**
- 2- Weil E 2003. *The corals and coral reefs of Venezuela*. In Jorge Cortéz (edit) *Latin American Coral Reefs . Pp 303- 330*. Elsevier Press.
- 1- Weil E & RA Laughlin 1994. *Laboratory cultures of larvae of Strombus gigas Linne, in the Dos Mosquises Marine Station, Los Roques National Park, Venezuela. Final Results. Queen Conch Biology, Fisheries, and Mariculture (eds. RS Appeldorn & V Rodriguez)*, pp: 275-294. Fundación Científica Los Roques, Caracas, Venezuela

## White Papers

- 14- Jeremy BC Jackson, Mary K Donovan, Katie L Cramer, Vivian YY Lam, Rolf PM Bak, Iliana Chollett, Sean R Connolly, Jorge Cortés, Phil Dustan, C. Mark Eakin, Alan M Friedlander, Benjamin J Greenstein, Scott F Heron, Terry Hughes, Jeff Miller, Peter Mumby, John M Pandolfi, Caroline S Rogers, Robert Steneck, **Ernesto Weil** (+ 58 authors). *Status and Trends of Caribbean Coral Reefs: 1970-2012. Global Coral Reef Monitoring Network, IUCN, Gland, Switzerland.* 304 pp.
- 13- Aronson, R., Bruckner, A., Moore, J., Precht, B., Weil, E., 2008. *Acropora palmata*, in: IUCN 2012. IUCN Red List of Threatened Species. Version 2013.1 <[www.iucnredlist.org](http://www.iucnredlist.org)>
- 12- **Weil E** 2006. *Geographic differences in coral reef diseases. Proceedings of the GEF-World Bank workshop, Puerto Morelos, Mexico, 2006.* 10.pp.
- 11- Zea, S.; M. López-Victoria, **E. Weil**, A. Chaves-Fonnegra, J.C. Márquez, C. Duque, L. Castellanos 2006. *Socavado esquelético y mortalidad coralina por esponjas excavadoras incrustantes en San Andrés Islas del Rosario.* Págs. 93-95 en: INVEMAR. *Informe del estado de los ambientes marinos y costeros en Colombia. 2005. Serie Publicaciones Periódicas INVEMAR 8, Santa Marta,* 360pp
- 10- **Weil E** and Jordán-Dalgren E 2005. Status of coral reef diseases in Zanzibar and Kenya, western Indian Ocean. *Progress report, GEF-WB Coral Reef Targeted Research and Capacity Building-Coral Disease Working Group.* 16 pp.
- 9- **Weil E** 2004. *Current status of the marine biodiversity of Puerto Rico.* Caribbean Marine Biodiversity: The known and the Unknown. Census for Marine Life - CoML and INTECMAR, **June 14-18, Margarita, Venezuela.** 25 pp.
- 8- **Weil E**, D Gil-Agudelo & GW Smith 2004. *The dark color syndromes in Caribbean corals: status and Field diagnostics.* **2<sup>nd</sup> CHDC Workshop on Coral Diseases, Madison, WI April 27-29,** 17 pp.
- 7- **Weil E**, GW Smith and J Cervino 2004. *Yellow blotch Syndrome in Caribbean corals.* **2<sup>nd</sup> CHDC Workshop on Coral Diseases, Madison, Wisconsin. April 27-29,** 12 pp.
- 6- **Weil E**, E Hernandez, A. Bruckner, A. Ortiz, M. Nemeth and H. Ruiz 2003. *Status of Acroporid Populations in Puerto Rico. Proc. of the Caribbean Acropora Workshop: Potential Application of the US Endangered Species Act as a Conservation Strategy.* NOAA technical Memorandum NMFS-OPR-24: 71-92.
- 5- **Weil E** 2002. *Coral disease epizootiology: Status and research needs. Coral Health and Disease: Developing a National Research Plan.* Coral Health and Disease Consortium, Charleston South Carolina, 2002, 14 pp.
- 4- **Weil E** 2001. Caribbean coral reef diseases. Status and research needs. In McManus J (editor) *Priorities for Caribbean Coral Reef Research National Center for Caribbean Coral Reef Research. RSMAS, U. of Miami, Florida* 10 pp.
- 3- **Weil E** 1999. *Diversidad y Abundancia de Corales, Octocorales y Esponjas en el Parque Nacional Jaragua, República Dominicana.* In *Biodiversidad Marino-Costera de la República Dominicana, JA Ottenwalder (edit),* 31 pp.
- 2- **Weil E** & LA Weigt 1996. *Protein starch-gel electrophoresis in scleractinian corals: a report on techniques and troubleshooting.* NOAA National Undersea Program. Caribbean Marine

**Research Center Technical Report Series # 96-13; 36 pp.**

- 1- **Weil E.** and R. Laughlin 1985. *Ecología, Cultivo y Repoblación del Botuto *Strombus gigas* L. en el Parque Nacional Archipiélago de los Roques.* Publicación especial de la Fundación Científica Los Roques # 17. 320 pp

**Reports**

- 6- **Weil E**, Morell J and J Corredor (1998). *Benthic Community Census and Bathymetric Survey of AEE cable from Vieques to Culebra, Puerto Rico. A report prepared for the Puerto Rican Electric and Power Authority.* 25 pp.
- 5- **Weil E** (1997). *Coral, Octocoral and sponge diversity in the reefs of the Jaragua National Park, Dominican Republic. Report prepared for the Biodiversity of the Marine Coastal Zone of the Dominican Republic.* 12 pp.
- 4- **Weil E**, M. Miller and AM Szmant (1995). *Community structure and environmental correlates of nine reefal areas in Biscayne National Park, Florida. Report to the Biscayne National Park,* 85 pp
- 3- **Weil E** (1985). *Scleractinian corals of the Archipiélago de los Roques National Park. Report series of the Fundación Científica Los Roques, Caracas.* 5 pp.
- 2- Laughlin, RA, E Weil and M Hauschild, 1985. *Pesquerías del botuto *Strombus gigas* L. en el Parque Nacional Archipiélago de los Roques: Pesquerías e impacto socioeconómico.* Publicación especial de la Fundación Científica Los Roques # 18, 32 pp.
- 1- Laughlin RA & E Weil (1985). *Ecología, cultivo y repoblación del botuto *Strombus gigas* en el Parque Nacional Archipiélago Los Roques. Final report.* Fundación Científica Los Roques, Caracas.320 pp.

**Educational**

- 5- **Weil E** and Hooten 2008. *Underwater Cards for Assessing Coral health on Caribbean Coral Reefs.* GEF-CRTR-Currie Comm. Australia. 30 pp.
- 4- **Beeden R**, Willlis BL, Raymundo LJ, Page CA and Weil E 2008. *Underwater Cards for Assessing Coral Health on Indo-Pacific Reefs.* GEF-CRTR-Currie Comm. Australia. 28 pp.
- 3- **Weil E** and Ruiz H (2004). *Underwater Guide for the Identification of Shallow Water Corals of the Wider Caribbean.* UNEP-CEP. 12 pp.
- 2- Ginsburg, R, S Lutz, P.Kramer, B Bischof and E Weil 1998. *Coral Reefs: Cities Under the Sea.* A set of Slides and text in English and Spanish prepared to introduce the Coral Reef community to different audiences.
- 1- Bruckner A, R Bruckner and E Weil 1998. *Caribbean Coral Diseases.* A set of laminated photographs with descriptions in Spanish and English of the different coral diseases and other coral problems in the Caribbean. SeaGrant and CARICOMP

**General Interest**

- 5- **Weil E** and J Posada 1984. *Las pesquerías de arrastre en Venezuela*. **Geomundo**, October, 1984.
- 4- **Weil E** and R Laughlin 1983. *Un recurso en extinción: las tortugas marinas*. **Ciencia al Día, NE 22** (1): 22-27.
- 3- Laughlin RA and **E Weil** 1983. *Los ambientes marinos de Venezuela*. **Geomundo** September, 1983.
- 2- **Weil E** and R Laughlin 1982. *El botuto o guarura a punto de desaparecer*. **Ciencia Día, NE 21** (2): 15-18.
- 1- **Weil E** 1982. *El arrecife coralino*. **Aviación** 8: 76-81

### **ABSTRACTS-PAPERS-POSTERS PRESENTED**

- 2016- Society for Integrative and Comparative Biology Meeting. Portland, Oregon. January 3-7, 2016.
- 2015- 37<sup>th</sup> AMLC Scientific Meeting, Curacao June 2015.
- 2015- US EPA 3<sup>rd</sup> Coral Reef BCG Expert Workshop - October 13 – 15, 2015- San Juan, Puerto Rico
- 2014- Ecology of Infectious Marine Disease. Friday Harbor Lab. Washington, USA
- 2014- Advances y Forecasting bleaching and disease epizootics. NSF-NOAA, Friday Harbor Lab. Washington, USA
- 2014- ASLO meeting, February 2014, Hawaii (Oral presentation)
- 2014- Faculty Development program - Department of Biology, University of Puerto Rico – Bayamon (Oral Presentation)
- 2014- 3<sup>rd</sup> Asian Pacific Coral Reef Symposium –, June 22-26, 2014, Kenting, Taiwan (Oral Presentation)
- 2014- Evolution Meeting, (Oral Presentation)
- 2014- EPA Biological Condition Gradient Workshop - University of Puerto Rico Field Station- El Yunque Conference Room – April 8 – 10, 2014.
- 2013- 8<sup>th</sup> International Conference on Coelenterate Biology. Eilat, Israel, Dec. 1-5, 2013. (Two Oral Presentations).
- 2013- International Seminar on Regional and Global Environmental Issue in Coastal Marine and Land Ecosystems. Environmental Leaders Program (ELSU). Plenary Speaker. Shizuoka, Japan, Sept. 23-27, 2013.
- 2013 - 7th Mexican and 1st Pan American Coral Reef Congress, Merida, Yucatan Mexico (7-11 Octubre, 2013. Plenary Speaker. One oral (plenary speaker) and one poster presentations.
- 2013- 36<sup>th</sup> Scientific Conference of the Association of Marine Laboratories of the Caribbean (AMLC) Discovery Bay, Jamaica. June 17-21. Two oral presentations.
- 2013- AAUS Symposium Curacao, June 10-14, 2013. One Oral presentation
- 2012- Evaluating the Impacts of a Changing Ocean on Management and Ecology of Infectious Marine Disease. RCN Workshop, Talaris Centre, Seattle, Oct. 26-29, 2012.
- 2012- International Dialogue on Underwater Munitions (IDUM). Science Specialists' working meeting. San Juan, Puerto Rico, Sept. 27-29 and Oct. 1-3, 2012.
- 2012- Department of Biological Sciences, Shizuoka University, Shizuoka, Japan. Invited Speaker to give a lecture on Coral Reef Decline in the Caribbean. Links to Climate Change. August, 2012.
- 2012- Quantifying Sustainability in Puerto Rico: A Scientific Discussion. Symposium/Workshop – Organized by the EPA - June 5-7, 2012, at the PR Convention Center, San Juan, Puerto Rico. Oral Presentation.
- 2012- 12<sup>th</sup> International Coral Reef Symposium, Cairns Australia, July 9 – 16. Oral and Poster
- 2012- IUCN/GCRMN Tropical America Workshop 30 April – 4 May 2012 Smithsonian Tropical Research Institute, Panama City, Panama.

- 2012- 37<sup>th</sup> Annual Eastern Fish Health Workshop High Peaks Resort, Lake Placid, New York -23 – 27 April 2012. Oral Presentation
- 2011- World University Network Workshop on Ocean Acidification, Poster presentation, Friday Harbor, WA. 2011.
- 2011- 35<sup>th</sup> Scientific Meeting of the Association of Marine Laboratories of the Caribbean, Costa Rica. Mayo 2011.
- 2011- ASLO Aquatic Sciences Meeting – San Juan Puerto Rico – February 13-18, 2011.
- 2011- Ecology of Marine Infectious Diseases (EMID) Workshop – ASLO- February 12-13, 2011
- 2010- Climate Change and Biodiversity – Department of Natural Resources Puerto Rico – Invited Speaker – November 17, 2010 – San Juan, PR.
- 2010- Reef Resilience and Climate Change Workshop for Reef Managers, St. Thomas, US Virgin Islands. May 12, 2010. Invited Speaker.
- 2010- The Pan - Caribbean Reef Restoration Workshop. Discovery Bay Marine Laboratory, St. Ann, Jamaica. June 21, 2010. Invited speaker.
- 2010- Department of Biological Sciences, Shizuoka University, Shizuoka, and Department of Biological Sciences, Ryukyu University, Okinawa, Japan. Invited Speaker March 2010.
- 2009 Darwin, la selección natural del conocimiento: el origen de grandes ideas. Bogota, Colombia – August 26-28, 2009. Plenary talk Darwin celebration.
- 2009 34<sup>th</sup> Scien. Meeting of the Assoc. of Marine Labs of the Caribbean. Dominica, May 24-29. O (1)
- 2008 11<sup>th</sup> International Coral Reef Symposium -5-10 July 2008. O (6), P (17)
- 2007 ESA Meeting, San Fernando, California, 5-10 August, 2007. O (2)
- 2007 EEID Meeting, Cornell University, Ithaca NY USA. May 28-30, 2007. O (1)
- 2007 33th AMLC Scientific Meeting, St Thomas, USVI June 4-8, 2007. O (3), P (4)
- 2007 Conservation Inter. Workshop on Caribbean Coral species, Dominica, March 20-23, 2007. O (1)
- 2007 Census of Marine Life – CoML – Panamá. 11-14 Feb, 2007. Invited talk (1).
- 2006 ITMES meeting, Cozumel, Mexico Oral . 10-10, 2006. O (1)
2005. 32th. Scientific Meeting of the Association of Marine Laboratories of the Caribbean. Curacao. O (2) - P (2)
- 2004- 10<sup>th</sup> International Coral reef Symposium. Okinawa Japan. June 28 – July 3 2004. P (3).
- 2003- 31<sup>st</sup>. Scientific Meeting of the Association of Marine Laboratories of the Caribbean. Port of Spain, Trinidad, July 2003. O (2).
- 2003- 7<sup>th</sup> International Conference on Cnidarians, Kansas University, Kansas . O (2)
- 2002- CARICOMP meeting. Cayman Islands. O (1).
- 2002- ICRI workshop for the Tropical America, Cancún, Mexico, June 12 - 14, 2002. Invited talk (1)
- 2002- Coral Disease and Health Consortium workshop, Charleston, South Carolina, Jan-22-25. O (1)
- 2001- NCORE workshop, RSMAS, University of Miami. Invited talk (1)
- 2001- 30<sup>th</sup>. Scientific Meeting of the Association of Marine Laboratories of the Caribbean. Puerto Rico O (4)
- 2001- ASLO Meeting, Albuquerque, NM.- O (1), P (1)
- 2000- 9<sup>th</sup> International Coral Reef Symposium, Bali Indonesia. O (4).
- 2000- 30<sup>th</sup>. ALMC Executive Board meeting. Bahamas. Invited talk
- 2000- 29<sup>th</sup> Benthic Ecology Meetings - Wilmington, North Carolina - USA. O (2).
- 1999- 29<sup>th</sup> Meeting of the Association of Marine Labs of the Caribbean, Cumaná, Venezuela. O (1).
- 1999- IASI Meeting - Panama City, Panama. Invited talk.
- 1999- ICRI Meeting - Ft. Lauderdale - Florida. O (2) - P (1).
- 1999- 28<sup>th</sup> Benthic Ecology Meetings - Baton Rouge Louisiana. O (2) - P (1).
- 1998- Atlantic and Gulf Coral Rapid Assessment (AGRA) meeting. Miami. O (1) - P (1).
- 1998- UNESCO-CARICOMP meeting in Jamaica. O (1).

- 1997- Association of Marine Labs of the Caribbean, Costa Rica. O (1).
- 1997- European Union of Geosciences Biannual Meeting, 1997. Abstract (1).
- 1996- VIII International Coral Reef Symposium, Panamá. O (2) - P (2).
- 1996- 27<sup>th</sup> Benthic Ecology Meetings, Wilmington, North Carolina. P (1).
- 1994- 26<sup>th</sup> Benthic Ecology Meetings, New Jersey. P (1).
- 1994- Keystone Symposia, Molecular Approaches to Marine Ecology and Evolution, New Mexico. P (1).
- 1992- VII International Coral Reef Symposium, Guam, O (1).
- 1988- VI International Coral Reef Congress. Australia. O (1).
- 1987- Sixty-third Annual Meeting of the Southwestern and Rocky Mountain Division of the American Association for the Advance of Science. Austin, Texas. 1987. O (1).
- 1984- XXXIV Congreso ASOVAC, Universidad de Oriente (UDO), Cumaná, Venezuela. O (1).
- 1983- XXXIII Congreso ASOVAC, Universidad Central de Venezuela. Caracas. O (1).
- 1982- XXXII Congreso ASOVAC; Universidad Simón Bolívar. Caracas. O (1).
- 1982- Thirty fifth annual meeting of the Gulf and Caribbean Fisheries Institute, Bahamas. O (1).
- 1980- VIII Congreso Latinoamericano de Zoología, Mérida, Venezuela. O (1).

#### GENERAL RESEARCH EXPERIENCE

- 2007- present- Environmental drivers of coral reef diseases
- 2006- present- Disease impact on the reproductive output of corals
- 2005- present- Epizootiology of coral reef diseases in the Indo-Pacific
- 2003- present- Impact of coral reef diseases in Caribbean coral reefs
- 2001- present- Epizootiology of coral reef diseases in the Caribbean and Indo-Pacific
- 2000- present- Remote sensing techniques to characterize coral spawn and fluorescence spectra of coral species.
- 1999- present- Diseases of corals and other reef organisms in the Caribbean
- 1999- present- Reproductive biology and ecology of Caribbean corals
- 1999- present- Latitudinal variation in incidence of coral diseases in the Caribbean
- 1996- present- Impact of the endolithic sponges *Cliona* spp on Caribbean Coral Reefs
- 1996- present- Distribution, abundance and diversity of coral juveniles in Puerto Rican coral reefs.
- 1994-96- Reproductive ecology and hybridization of the different species of *Montastraea* in Florida
- 1994-96 - Effects of Hurricane Andrew on the coral reefs of Biscayne National Park, Florida.
- 1989-90 - Molecular and morphological taxonomy of *Porites* in the Caribbean and the eastern Pacific.
- 1986-88- Multivariate taxonomy of the *Montastraea annularis* species complex in Panama
- 1985- present Systematics and evolution of scleractinian corals in the Caribbean and eastern Pacific.
- 1985-90 Coral Reef community structure and biodiversity of the Caribbean reefs of Panama.
- 1986-90 Oil spill effects on subtidal reef communities in the Caribbean coast of Panama.
- 1986- present- Coral mortality and substrate monopolization by the sponge complex *Cliona aprica*.
- 1980-85- Ecology, Culture and Stock Restoration of the queen conch, *Strombus gigas* L. in the Archipiélago de los Roques National Park, Venezuela.
- 1981-85- Ecology, Culture, fisheries and stock restoration of sea turtles in the Archipiélago de Los Roques National Park. Venezuela.
- 1983-presnt- Ecology, biodiversity and taxonomy of the coral reefs of Venezuela.
- 1979-85- Larval and juvenile rearing under laboratory conditions of commercially important Decapods and Gastropods in the Archipiélago de los Roques National Park. Venezuela.
- 1979-85- Seagrass and rocky shore community ecology. Archipiélago de los Roques National Park,

- Venezuela.
- 1979-85- Biology and fisheries of commercially important fishes and mollusks in the Archipiélago de los Roques National Park. Venezuela.
- 1979-81- Ecology and Conservation of the Isla Aves Ecosystem with emphasis on the tagging of the green turtle (*Chelonia mydas*) and birds, both resident and migratory. FUDENA-WWF
- 1978-80- Effects of the black sea urchin *Diadema antillarum* on the community structure of reefs in the Morrocoy National Park, Venezuela.