

## Sarah LEMER, Ph.D

Personal details			
Full name	Sarah Lemer		
Present position	Assistant Professor of Marine Invertebrate Genomics		
Organization	University of Guam		
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### EDUCATION

#### 2011 Ph.D. in Genetics, Biodiversity and Evolution

Ecole Pratique des Hautes Etudes, Sorbonne - CRIOBE-USR3278 - LABEX CORAIL, France  
 Graduated Magna cum Laude

Thesis title: Genetic connectivity and historical demography of fragmented populations: tools to evaluate the impact of aquaculture on wild populations of the pearl oyster *Pinctada margaritifera* in French Polynesia.

Thesis supervisor: Dr. Serge Planes

#### 2006 M.Sc. in Oceanography, Biology and Marine Ecology

University of Aix-Marseille II, Dept.of Oceanography, France  
 Graduated Magna cum Laude:

Thesis title: Phylogeography of the reef fishes of the genus *Siganidae* in the Indo-Pacific

Thesis Advisors: Dr. Dider Aurelle and Dr. Philippe Borsa

#### 2004 B.Sc. Biology of Marine organisms

University of Aix-Marseille II and University Louis Pasteur of Strasbourg, France

### PROFESSIONAL APOINTEMENTS and RELEVANT RESEARCH TOPICS

2020 - Present **Assistant Professor of Marine Invertebrate Genomics – University of Guam Marine Laboratory**  
**Assistant Curator of Mollusks– University of Guam Marine Laboratory**  
**Faculty in Charge of the Genomics Laboratory – University of Guam Marine Laboratory**

- Evolutionary biology of marine invertebrate species associated with coral reefs: phylogenomics and phylogeography (Decapoda, Mollusca).
- Effects of global climate change and reef degradation on the genetic connectivity, structure and adaptation of invertebrate reef species: seascape genomics (Decapoda, Mollusca, Scleractinia).
- Role of phenotypic plasticity in heat resistance in scleractinian corals: transcriptomic, gene expression, microbiome and transgenerational experiments.
- Sequencing and annotating invertebrate genomes: Cardiidae, Gastropoda and Scleractinia.
- Collect mollusk specimens and tissue, digitize image database; organize Bioblitz collection in Marianas
- Designed, organize, and manage the Genomics Laboratory from start, including running and maintaining the Illumina NextSeq 550 sequencer.

#### Advising and Mentoring:

- 3 Postdoctoral Researchers (Heloise Rouze, Carlos Leiva, and Pierre-Louis Stenger)
- 2 Research and field assistant (Rachel Zimmerman, Constance Sartor, Ginger Carter)
- 3 current Master students (Oliva Barry, Kenzie Pollard, Monica Salas), 2 Master students graduated in 2020 and 2021 (Victoria Moscato and Constance Sartor), currently on the committee of 6 others.
- 4 Undergraduate students (Nikko Galanto, Laura Caser, Amihya Cacapit, Anela Duenas).

**2016 - 2020 Senior Research Faculty of Genomics - University of Guam Marine Laboratory**

- Metazoa phylogenomics
- Phylogenomics of Cardiidae: Evolution of photosymbiosis in bivalves
- Population genomics of coral reef species under threat from global climate change
- Transcriptomics of coral acclimation to heat stress

Advising and Mentoring:

- On the committee of 1 Ph.D student (Pierre Louis Stenger, Université de Paris Science Lettre, France)
- 2 Master students (graduated, Victoria Moscato and Constance Sartor), on the committee of 4 others.
- 7 undergraduate students (Mikel Lizama, Charles Hambley, Vince Fabian, Jasmin Rotan, Nikko Galanto, Naomi Borg, Joanna Panaguiton)

**2012 – 2014 Post-doctoral Associate – Museum of Comparative Zoology, Harvard University, Dept. of Organismic and Evolutionary Biology**

- Mollusca population genomics: *Pinctada margaritifera* and Pinnidae
- Bivalvia and Pteriomorpha phylogenomics
- Population genomics of Nautilidae
- Sipuncula Phylogenomics

**2011 – 2012 Post-doctoral Fellow - French National Center of Scientific Research (CNRS), France**

- Transcriptomic processes involved in shell color in the pearl oyster *Pinctada margaritifera*.

**2008 – 2011 Ph.D. Candidate - Ecole Pratique des Hautes Etudes, Sorbonne, France**

- Genetic connectivity and historical demography of fragmented populations of commercial bivalves.

Advising and Mentoring:

- 1 Master student (Celia Mathot)

**2006 – 2008 Research assistant - Research and Development Institute (IRD), New-Caledonia.**

- Implementing genetic tools to identify commercial reef fish larvae of New Caledonia

**2004 – 2006 Master research thesis - Marine Station of Endoume (France) & IRD Institute, New-Caledonia.**

- Phylogeography of the reef fishes of the genus *Siganidae* in the Indo-Pacific

**2004 B.Sc. 3<sup>rd</sup> year research thesis - Marine Station of Endoume, France.**

- Histological characterization of reproductive stages of sponges of the genus *Aplysina*.

**2003 B.Sc. 2<sup>nd</sup> year research thesis - Marine Station of Endoume, France.**

- Evo-Devo: Identification of Antennapedia genes in Homoscleromorph sponges

**AFFILIATED POSITIONS****2019- 2022 Research Associate – Smithsonian, National Museum of Natural History.**

- Sequencing and annotating Scleractinia genomes

**2016- 2021 Research Associate – Museum of Comparative Zoology, Harvard University, Dept. of Organismic and Evolutionary Biology**

- Metazoa phylogenomics

**FIELDWORK AND MUSEUM COLLECTION EXPERIENCE**

Fieldwork: Participated in collection, preservation, and accession of tissue and specimens of bivalves in two cruises in the Tuamotu and Gambier Archipelagos (French Polynesia) using free- and scuba-diving. Organized and participated in two field expeditions in the Philippines and Baja California to collect marine bivalves using free- and scuba-diving. Organized and participated in a field expedition in Thailand to collect *Nautilus* using trawls and crab cages. Conduct regular field work in Guam and the Mariana islands to collect corals.

Collections: Assisted in transfer of specimens from my field trips to the MCZ invertebrate and cryo-collection. Sorted and studied natural history collections at different museums (AMNH, FLMNH, MCZ, FMNH, MNHN and the Museum of Natural History of Manila) Curate and manage the collection of marine invertebrates as Assistant Curator of mollusks at the University of Guam.

**PUBLICATIONS:** \* graduate student lead; \*\*undergraduate student lead

Total number of citations 821 / h-index: 16 / i10-Index: 17

In Review

30. N. Galanto\*\*, C. Sartor\*, V. Moscato\*, **S. Lemer**. Effect of Heat Stress on Reproduction and Larvae Settlement in *Leptastrea purpurea*. *In review: Coral Reefs*
29. YH. Phua\*, MC. Roy, **S. Lemer**, F. Husnik, KC. Wakeman. Phylogeny of benthic dinoflagellate *Amphidinium* (Dinophyceae) from the South Pacific Islands of Guam and Okinawa, with the description of *A. pagoensis sp. nov.* and *A. uduigamensis sp. nov.* *In review in Phycologia*

Published

28. YH. Phua\*, MC. Roy, **S. Lemer**, F. Husnik, KC. Wakeman. **2021**. Diversity and toxicity of Pacific strains of the benthic dinoflagellate *Coolia* (Dinophyceae), with a look at the *Coolia canariensis* species complex. *Harmful Algae*. 109: 102-120.
27. V. Fabian\*\*, P. Houk, **S. Lemer**. **2021**. Resolving the Phylogenetic Relationship of Micronesian Emperor Fishes. *Molecular Phylogenetics and Evolution*. 162 (2021):107207
26. J. Moles, TJ. Cunha, **S. Lemer**, D. Combosch, G. Giribet. **2021**. Tightening the girdle: Phylotranscriptomics of Polyplacophora. *Journal of Molluscan Studies – Journal of Molluscan Studies – 84(2):eyab019*
25. J. Fifer\*, B. Bentlage, **S. Lemer**, A. Fujimura, M. Sweet, L. Raymundo. **2021**. Going with the flow: Corals in high-flow environments can beat the heat. *Molecular Ecology* <https://doi.org/10.1111/mec.15869>
24. P. Houk, **S. Lemer**, D. Hernandez, J. Cuetos-Bueno. **2021**. Evolutionary management of coral-reef fisheries using phylogenies to predict density dependence. *Ecological applications – Ecological applications :e02409*
23. J. Li; **S. Lemer**; L. Kirkendale; R. Bieler; C. Cavanaugh; G. Giribet. **2020**. Shedding light: A phylotranscriptomic perspective illuminates the origin of photosymbiosis in marine bivalves. *BMC Evolutionary Biology*. 20, 1-15
22. C. Laumer, R. Fernandez, **S. Lemer**, D. Combosch, K. Kocot, A. Riesgo, S. Andrade, W. Sterrer, M. Sorensen, G. Giribet. **2019**. Correction to ‘Revisiting metazoan phylogeny with genomic sampling of all phyla’. *Proceedings of the Royal Society B*: 286
21. C. Laumer, R. Fernandez, **S. Lemer**, D. Combosch, K. Kocot, A. Riesgo, S. Andrade, W. Sterrer, M. Sorensen, G. Giribet. **2019**. Revisiting metazoan phylogeny with genomic sampling of all phyla. *Proceedings of the Royal Society B*: 286
20. **S. Lemer**, R. Bieler, G. Giribet. **2019**. Resolving the relationships of clams and cockles: dense transcriptome sampling drastically improves the bivalve tree of life. *Proceedings of the Royal Society B*: 283
19. T. Cunha\*, **S. Lemer**, P. Bouchet, Y. Kano, G. Giribet. **2019**. Putting keyhole limpets on the map: Phylogeny and biogeography of the global marine family Fissurellidae (Vetigastropoda, Mollusca). *Molecular Phylogenetics and Evolution*; 135:249-269
18. D. Combosch, **S. Lemer**, N. Landman, P. Ward, G. Giribet. **2017**. Genomic signatures of evolution in the living fossil Nautilus. *Molecular Ecology*, 26:5923-5938. **Shared first authorship**
17. PUPA. Gilbert, KD. Bergmann, CE. Myers, RT. DeVol, CY. Sun, AZ. Blonsky, J. Zhao, EA. Karan, E. Tamre, N. Tamura, MA. Marcus, AJ. Giuffre, **S. Lemer**, G. Giribet, JE. Eiler, AH. Knoll. **2017**. Nacre tablet thickness records formation temperature in modern and fossil shells. *Earth and Planetary Science Letters*; 460:281-292
16. D. Combosch; TM. Collins; EA, Glover; DL. Graf; EM. Harper; JM. Healy; GY. Kawauchi; **S. Lemer**; E. McIntyre; EE. Strong; JD. Taylor; JD. Zardus; PM. Mikkelsen; G. Giribet, R. Bieler. **2017**. A family-level Tree of Life for bivalves based on a Sanger-sequencing approach. *Molecular Phylogenetics and Evolution*, 107: 191-208
15. **S. Lemer**, D. Combosch, D. Dumale, F. Sotto, V. Soliman, G. Giribet. **2016**. The family Pinnidae (Mollusca, Bivalvia) in the Philippine archipelago: observations on its distribution and phylogeography. *The Nautilus*, 130:4.
14. **S. Lemer**, V. González, R. Bieler, G. Giribet. **2016**. Cementing mussels to oysters in the pteriomorphian tree: a phylogenomic approach. *Proceedings of the Royal Society B*, 283:1833
13. **S. Lemer**, D. Saulnier, Y. Gueguen, S. Planes. **2015**. Identification of genes associated with shell color in the black-lipped pearl oyster, *Pinctada margaritifera*. *BMC Genomics*, 16:568
12. **S. Lemer**, GY. Kawauchi, CS Andrade, MJ Boyle, G. Giribet. **2015**. Re-evaluating the phylogeny of Sipuncula through transcriptomics. *Molecular Phylogenetics and Evolution*, 83: 174-183
11. R. Fernandez, **S. Lemer**, G. Giribet. **2015**. Comparative phylogeography and population genetic structure of three widespread mollusc species in the Mediterranean and near Atlantic. *Marine Ecology*, 36: 701-715. **Shared first authorship**

10. **S. Lemer** & G. Giribet. **2014**. Occurrence of a bivalve-inhabiting marine hydrozoan (Hydrozoa, Hydroidolina, Leptothecata) in the amber pen-shell *Pinna carnea* Gmelin, 1791 (Bivalvia, Pteriomorpha, Pinnidae) from Bocas del Toro. *Journal of Molluscan Studies*, 80: 464-468
9. G. Giribet, **S. Lemer**. **2014**. On the occurrence of *Tuleocaris neglecta* Chace, 1969 (Decapoda, Palaemonidae, Pontoniinae) in *Echinometra lucunter* (Linnaeus, 1758) (Echinodermata, Echinoidea, Echinometridae) in the archipelagos of Bocas del Toro, Panama. *Crustaceana*, 87: 634-638
8. **S. Lemer** & S. Planes. **2014**. Effects of habitat fragmentation on the genetic structure and connectivity of the black-lipped pearl oyster *Pinctada margaritifera* populations in French Polynesia. *Marine Biology*, 161: 2035-2049
7. **S. Lemer**, B Buge, A. Bemis, G. Giribet. **2014**. First molecular phylogeny of the circumtropical bivalve family Pinnidae (Mollusca, Bivalvia): evidence for high levels of cryptic species diversity. *Molecular Phylogenetics and Evolution*, 75: 11-23
6. **S. Lemer** & S. Planes. **2012**. Translocation of wild populations: conservation implications for the genetic diversity of the black-lipped pearl oyster *Pinctada margaritifera*. *Molecular Ecology*, 21: 2949-2962
5. A.C. Stier, M.A. Gil, C.S. McKeon, **S. Lemer**, M. Leray, S.C. Mills, C.W. Osenberg. **2012**. Housekeeping mutualisms: do more symbionts facilitate host performance? *PLoS ONE* 7(4):e32079.
4. **S. Lemer**, E. Rochel, S. Planes. **2011**. Correction method for null alleles in species with variable microsatellite flanking regions, a case study of the black-lipped pearl oyster *Pinctada margaritifera*. *Journal of Heredity*, 102 (2) 243-246
3. S. Planes & **S Lemer**. **2011**. Individual-based analysis opens new insights into understanding population structure and animal behaviour. *Molecular Ecology*, 20: 187-189
2. P. Borsa, **S Lemer**, D. Aurelle. **2007**. Patterns of lineage diversification in rabbitfishes. *Molecular Phylogenetics and Evolution*, 44: 427-435.
1. **S. Lemer**, D. Aurelle, L. Vigliola, J.D. Durand, P. Borsa. **2007**. Cytochrome b barcoding, molecular systematics, and geographic differentiation in rabbitfishes (Siganidae). *Comptes Rendus Biologies*, 330 (1): 86-94.

## TEACHING

### Graduate Level:

- 2021 - Present                    **Marine Conservation Genomics:** Hokkaido Summer Institute, Hokkaido University  
 2020 - Present                    **BI546 Marine Invertebrate Biology:** University of Guam  
 2017 - Present                    **BI691 Introduction to Biogeography:** University of Guam

### Undergraduate Level:

- 2014 – 2016                    **Life Science 1B Genetics, Genomics and Evolution (TF):** Harvard University  
 2013 -2015                    **OEB51 Biology and Evolution of Invertebrate Animals (TF):** Harvard University  
 2009– 2011                    **Introduction to Population Genetics (guest lecturer):** Ecole Pratique des Hautes Etudes

## INVITED CONFERENCE AND SEMINAR TALKS

- 2021                    **Duke University, Organisms and Evolution Seminar**
- Mechanisms of Bleaching Resistance in *Acropora* corals: a transcriptomic approach
- 2021                    **Woods Hole Oceanographic Institution, MA-USA**
- Bleaching Inequality in *Acropora* Corals: a Transcriptomic Approach
- 2021                    **Northeastern University Marine Science Center, MA -USA**
- Molecular Mechanisms behind bleaching disparity in conspecific corals
- 2021                    **SCRIPPS Institution of Oceanography, UC san Diego, CA -USA**
- Bleaching Inequality in Conspecific Corals
- 2020                    **Reef Conservation UK, Zoological Society of London, Plenary Speaker**
- Insight into Bleaching Disparity among Conspecific Corals
- 2020                    **American Museum of National History, Comparative Biology Seminar**
- Transcriptomic and Epigenetic Mechanisms of Coral Acclimation to Heat Stress
- 2020                    **Friday Harbor Labs Summer Seminar Series**
- Transcriptomic and Epigenetic Mechanisms of Coral Acclimation to Heat Stress
- 2019                    **World Congress of Malacology, Monterey, CA: Panelist**
- Working in academia when being non-native & developing international collaborations

- 2019 **Conference on Island Sustainability X**, Guam.
- Marine Science in Guam. **Chair**
- 2018 **Society for the Advancement of Chicanos & Native Americans in Science (SACNAS)**
- Marine genomics symposium. **Chair**
- 2017 **Swire Institute of Marine Science, Special Seminars - Hong Kong University**
- Evolutionary Genomics and the EPSCoR Guam Ecosystem Collaboratorium
- 2017 **Poets Club Public Talks- University of Guam Marine Laboratory**
- The Mystery of the Black Pearls: An in-depth Exploration of the Black-lipped Pearl Oyster
- 2015 **Museum of Comparative Zoology - Harvard University**
- Transcriptomes as tools to reconstruct phylogenetic relationships of non-model specie

### CONFERENCE TALKS

- 2021 **United Nation Decade of Oceans Sciences Symposium**, virtual symposium
- The Guam Ecosystem Collaboratorium for Corals and Oceans
- 2019 **World Congress of Malacology**, Monterey, CA
- Genomic Signatures of Evolution in *Nautilus*, An Endangered Living Fossil
- 2019 **World Congress of Malacology**, Monterey, CA
- Resolving the Relationships of Clams and Cockles with Transcriptome Data
- 2019 **Evolution meeting**, Providence, RI
- Population Genomics of *Nautilus*, An Endangered Living Fossil
- 2018 **Asia Pacific Coral Reef Symposium**, Philippines
- Epigenetic modifications in *Acropora digitifera* during heat acclimation
- 2018 **Guam Coral Reef Symposium**, Guam
- Differential gene expression in *Acropora digitifera* during heat acclimation
- 2017 **European Coral Reef Symposium**, United Kingdom
- Differential gene expression in *Acropora digitifera* during heat acclimation
- 2016 **World Congress of Malacology**
- Cementing mussels to oysters in the pteriomorphian tree: a phylogenomic approach
- 2013 **World Congress of Malacology**
- Patterns of diversification in the family Pinnidae
- 2012 **International Coraf Reef Symposium**
- Reconstructing the historical demography of lagoon invertebrates in relation to Pleistocene sea-level fluctuations
- 2009 **11<sup>th</sup> Pacific Science Inter-Congress**, French Polynesia
- Population genetics of *Pinctada margaritifera* in French Polynesia

### CONFERENCE POSTERS

- 2019 **Gordon Research Conference: Marine Molecular Ecology**, Hong Kong
- Epigenetic modifications and differential gene expression in *Acropora digitifera* during heat acclimation
- 2013 **World Congress of Malacology**
- Transcriptomic processes leading to albinism and shell color variation in the pearl oyster *Pinctada margaritifera*
- 2010 **European Coral Reef Symposium**, Netherlands
- Genetic connectivity of *Pinctada margaritifera* in French Polynesia
- 2009 **11<sup>th</sup> Pacific Science Inter-Congress**, Tahiti, French Polynesia
- Impact of pearl farming on the genetic diversity of *Pinctada margaritifera*

**RESEARCH GRANTS**

2021	<b>Nasa EPSCoR, Co- PI</b>	Pending: \$10,000
	<ul style="list-style-type: none"> <li>Assessment and prediction of eutrophication on coral health in Guam using remote sensing tools and gene expression biomarkers</li> </ul>	
2020	<b>National Fish &amp; Wildlife Foundation, Lead PI</b>	\$118,779
	<ul style="list-style-type: none"> <li><u>Developing a genetic &amp; microbiome toolkit to assess and predict stress levels in corals</u></li> </ul>	
2020	<b>Sea Grant Competitive Research, Lead PI</b>	\$39,508
	<ul style="list-style-type: none"> <li>A simple genetic toolkit to assess stress levels in local corals</li> </ul>	
2020	<b>NSF Guam EpScor, Research Lead</b>	\$20,000,000
	<ul style="list-style-type: none"> <li><u>Guam Ecosystem Collaboratorium for Corals and Oceans</u></li> </ul>	
2019	<b>Dovetail Genomics, co-PI</b>	
	<ul style="list-style-type: none"> <li>Sequencing the genome of <i>Tridacna maxima</i></li> </ul>	\$8,000
2019	<b>NSF Guam EPSCoR Seed Grant, Lead PI</b>	\$11,550
	<ul style="list-style-type: none"> <li>Guam coral genome sequencing, assembly, and annotation</li> </ul>	
2018	<b>NSF Guam EPSCoR Seed Grant, Lead PI</b>	\$6,500
	<ul style="list-style-type: none"> <li>Climate change and the epigenetics of corals: Part 2</li> </ul>	
2018	<b>NSF Guam EPSCoR Seed Grant, Lead PI</b>	\$9,640
	<ul style="list-style-type: none"> <li>Characterization of "Coral Glow" in <i>Acropora</i> sp</li> </ul>	
2017	<b>National Fish &amp; Wildlife Foundation, co-PI</b>	\$48,445
	<ul style="list-style-type: none"> <li><u>Using fish DNA to create a new predicative fisheries management tool for Micronesia</u></li> </ul>	
2017	<b>NSF Guam EPSCoR Seed Grant, Lead PI</b>	\$10,000
	<ul style="list-style-type: none"> <li>Climate change and the epigenetics of corals: Part 1</li> </ul>	
2017	<b>NSF Guam EPSCoR Seed Grant, Lead PI</b>	\$9,055
	<ul style="list-style-type: none"> <li>Differential gene expression during bleaching</li> </ul>	
2014	<b>Putnam Expedition Grant, MCZ, Harvard University, co-PI</b>	\$10,970
	<ul style="list-style-type: none"> <li>Collecting Nautilidea in Thailand</li> </ul>	
2013	<b>Putnam Expedition Grant, MCZ, Harvard University, Lead PI</b>	\$10,192
	<ul style="list-style-type: none"> <li>Collecting Pinnidae in Baja California Sur, Mexico</li> </ul>	
2012	<b>Putnam Expedition Grant, MCZ, Harvard University, Lead PI</b>	\$7,500
	<ul style="list-style-type: none"> <li>Collecting Pinnidae in the Philippines</li> </ul>	

**FELLOWSHIPS AND AWARDS**

2013	<b>Postdoctoral Award for Professional Development</b>	\$1,000
	<ul style="list-style-type: none"> <li>Faculty of Arts and Sciences, Harvard University, MA, USA</li> </ul>	
2011	<b>Price for outstanding young researchers: Life Science</b>	€25,000
	<ul style="list-style-type: none"> <li>The Bettencourt-Schueller Foundation, L'Oréal</li> </ul>	
2006	<b>Academic Merit Scholarship</b>	€4,000
	<ul style="list-style-type: none"> <li>The French National Department of Advanced Education and Research</li> </ul>	

**PROFESSIONAL DEVELOPMENT WORKSHOPS**

2021	Online Teaching Certification I: Americans with Disability Act standards – University of Guam
2019	Genome Annotation Workshop – Smithsonian National Museum of Natural History
2017	NSF 'How to stand out as a Super Communicator' - Hawaii
2014	Next-generation sequencing for phylogenetics - NESCent Academy
2012	Evolution workshop - Sao Paulo School of Advance Science, Brazil
2010	Marine Genomics Europe Summer Course - Roscoff Biological Station, France
2009 - 2011	Ocean Bridges Partner University Fund – University of Florida

**SCIENTIFIC OUTREACH EVENTS AND MEDIA**

- 2021 **Guam EPSCoR:** Coral resilience experiment explained. Graduate student Constance Sartor and Dr. Lemer introduction video: <https://youtu.be/uv92DBWQyJA>
- 2021 **Sea Grant** short presentation of my research on coral reefs in Guam  
<https://www.youtube.com/watch?v=owS6uss8ebo>
- 2020 **Kotick video game:** Increase environmental awareness in children (France). **Scientific Advisor**
- 2020 **Nihi! Kids: Island Science:** Coral reefs of Guam (Facebook live platform)
- 2018 **Science Sunday** - T. Stell Newman Visitor Center, Santa Rita, Guam  
Guam Coral Genetics: Genes against Bleaching. Public presentation and Q&A.
- 2017 **KUAM TV Interview:** Guam Coral genetics: <https://www.youtube.com/watch?v=OfWnOrw8Y5E>
- 2017 **Pacific Daily news:** UOG faculty talk coral at University of Hong Kong  
[www.guampdn.com/story/news/2017/11/03/uog-faculty-talk-coral-university-hong-kong/828028001/](http://www.guampdn.com/story/news/2017/11/03/uog-faculty-talk-coral-university-hong-kong/828028001/)
- 2017 **Science Video:** What is Coral Bleaching: <https://www.youtube.com/watch?v=UuA31OPtUVI>
- 2014 **Descience-Research on the runway** - MIT Media Lab  
Under the Sea: Evolution of tropical marine invertebrates: <https://descience27.carbonmade.com/>
- 2012 **Direction of Marine Resources** - French Polynesia.  
Genetic control of shell color in *Pinctada margaritifera*.
- 2011 **French National Science Fair** - Paris, France.  
Science communication: Corals facing global warming.

**SCIENTIFIC OUTREACH PUBLICATIONS:**

11. Book chapter in the French National Center for Scientific Research (CNRS) book. **2021.** "Étonnant Recifs". Chapter title "Le patrimoine génétique de l'huître perlière révèle les multiples secrets de la perle noire de Polynésie"
10. Virginia Tech Center for Communicating Science. **2021.** Projet on oral history to preserve stories of Black excellence in STEM fields through interviews.
9. Contributed to Marta Lynn-Crump book on on the history of women in field biology, under contract with CRC Press. **2020.**
8. **S. Lemer. 2014.** Descience goes under the sea: The hurdle of Science communication. by Scientist Sarah Lemer from Team Abyss-Moana.  
<https://fashiondescience.tumblr.com/post/90065814371/descience-goes-under-the-sea-by-scientist-sarah>
7. C. Belliard, H. Bichet, C. Blay, M. Demoy-Schneider, A. Fougerouse, N. Gaertner-Mazouni, P. Garen, Y. Gueguen, C. Herbinger, CL. Ky, E. Lacoste, H. Leduc, **S. Lemer**, G. Le Moullac, C. Lo, A. Lo-Yat, S. Planes, D. Saulnier, M. Sham Koua, V. Teaniniuraitemoana. **2014.** Project: BIODIPERL, Préservation de la biodiversité des stocks d'huîtres perlières *Pinctada margaritifera* en Polynésie française pour une exploitation durable de la ressource en perliculture. Final Report.
8. **S. Lemer & F. Sotto. 2013.** Harvard University Postdoctoral fellow collaborates with marine research station. University San Carlos Marine Research Station, Cebu, Philippines.  
<https://uscmarineres.wordpress.com/2013/06/06/harvard-u-postdoctoral-fellow-collaborates-with-marine-research-station/>
5. **S. Lemer. 2012.** Project : Analyse du déterminisme génétique de la couleur de la nacre par les processus conduisant à l'albinisme. Final Report. Department of Fisheries of French Polynesia.
4. Y. Gueguen, M. Demoy-Schneider, P. Garen, C. Herbinger, G. Le Moullac, **S. Lemer**, A. Lo-Yat, S. Planes. **2012.** Project : REGENPERL "Ressources génétiques de la Perliculture polynésienne". Final Report
3. Y. Gueguen, E. Bachere, JP. Cuif, J. Guezennec, G. Gutierrez, CL. Ky, JM. Lebel, G. Lecellier, **S. Lemer**, G. Le Moullac, B. Marie, F. Marin, C. Montagnani, C. Pavat, D. Piquemal, S. Planes, D. Saulnier, M. Serrar, C. Simon-Colin. **2011.** Project : GDR ADEQUA, Amélioration de la qualité des perles de *Pinctada margaritifera* de Polynésie française. Final Report ANR, France.
2. P. Borsa, **S. Lemer**, WJ Chen, A. Collet, L. Carassou, D. Ponton. **2009.** Identification par barcode (séquences nucléotidiques d'un fragment de gene du cytochrome b) des larves de *Lethrinidea* capturées en baies de Dumbéa et Ouano (Nouvelle-Calédonie). Final Report ZoNéCo. IRD, Nouméa, IRD Nouméa Report, 60pp.
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**ADMINISTRATIVE AND COMMUNITY SERVICES**

- 2021 - Present Elected member of the University of Guam Faculty Election Committee
- 2021 – Present Elected Chair of Biology Graduate Student Recruitment Committee.
- 2018-2021 Secretary of the University of Guam Biology Graduate Program Faculty Committee
- 2018 Member of the Proposal and Thesis guideline committee - UOG Biology Graduate Program
- 2017- Present Faculty in Charge of the Genomics Laboratory - UOG Marine Lab  
*Designed, organize and manage the Genomics laboratory from start-up, including running and maintaining the Illumina NextSeq 550 sequencer.*
- 2017-Present Member of the University of Guam Marine Laboratory Dive Control Board
- 2014-2016 Coordinator of the Harvard Museum of Comparative Zoology bi-monthly seminar series
- 2008-2011 Graduate student representative: École Pratique des Hautes Etudes, France.

**SCIENTIFIC REVIEWER / EDITOR**

- 2021 – Present Associate Editor for Molecular Phylogenetics and Evolution
- 2019 - Present NSF: DEB- Systematic and biodiversity Science, OCE- Biological oceanography
- 2010 - Present Nature Communications, Scientific Reports, Molecular Ecology, Molecular Ecology Resources, Molecular Phylogenetic and Evolution, Marine Ecology, Plos One, Journal of Molluscan Studies, Evolutionary Biology, Peer J, Gene, Animal Genetics, Zoological Journal of the Linnaean Society, Systematic and Biodiversity, Biological Journal of the Linnaean Society, Animals Genetics, Aquaculture Reports, Ecology & Evolution, Hydrologia.

**ACTIVE ORGANIZATIONS:**

- AAUS Scientific Diver
- PADI Rescue Diver
- Malaco-Diveristy Project: investigating diversity, equity, and inclusion in molluscan research.
- International Coral Reef Society
- Society for the Study of Evolution
- Unitas Malacologica
- International Society for Reef Studies.
- Global Invertebrate Genomic Alliance
- The Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)
- Harvard Graduate Women in Science and Engineering Organization.
- Black Women in Ecology, Evolution and Marine Science (BWEEMS)
- Black in Marine Sciences (BIMS)

**References**

1. **Gonzalo Giribet:** Professor of Organismic and Evolutionary Biology, Director of the MCZ  
Harvard University  
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I was a postdoctoral researcher in Gonzalo's lab from 2012 to 2016, and a teaching fellow for his OEB51 Biology and Evolution of Invertebrate Animals course. We continue to collaborate on phylogenomics projects.
2. **Rudiger Bieler:** Curator of Invertebrates  
Field Museum of Natural History - Integrative Research Center  
[rbieler@fieldmuseum.org](mailto:rbieler@fieldmuseum.org)  
Rudiger is a colleague with whom I extensively collaborated on the BIVAToL NSF Grant. We co-authored four publications on bivalve phylogeny and phylogenomics.
3. **Peter Houk:** Associate Professor of Population Ecology  
University of Guam Marine Laboratory  
[peterhouk@gmail.com](mailto:peterhouk@gmail.com) / 671-735-2188  
Peter is a population ecologist and a colleague in my current institution. We were co-PI on a NFWF grant and collaborated on a project linking phylogeny and ecology. We co-authored two papers together.