Elora Hayter López-Nandam

Current Position

2021- Postdoctoral Researcher. California Academy of Sciences, Hope for Reefs Initiative

Education

2021 Ph.D. Stanford University, Biology (Hopkins Marine Station)
2015 B.A. Columbia University, Environmental Biology (Ecology and Evolution track)

Fellowships

2015 NSF Graduate Research Fellowship
2015 Morgridge Family Fellowship (Stanford Graduate Fellowship in Science and Engineering)
2015 Ford Foundation Predoctoral Fellowship (declined)
2013 NSF Biology REU at the American Museum of Natural History

Grants, Honors, and Awards

2021 Forbes 30 Under 30 in Science, Class of 2022
2020 Walter M. Fitch Award Finalist, Society for Molecular Biology and Evolution
2018 National Geographic Early Career Explorer Grant
2018 The Explorers Club Rolex Explorer Grant
2018, 19 Society for Molecular Biology and Evolution Young Investigator Travel Award (2x)
2016, 18 Stanford Office of Graduate Education Travel Grant Award (2x)
2014 Dept. of Ecology, Evolution and Environmental Biology (E3B) Thesis Research Award
2014 The Explorers Club Youth Activity Fund
2014 Columbia Undergraduate Scholars Program (CUSP) Summer Enhancement Fellowship
2014 Columbia College Class of 1939 Summer Research Fellowship
2014 Columbia University Earth Institute Student Travel Grant
2014 NSF Biology REU Mentor-Student Travel Scholarship (with Dr. Mary Blair)
2011 John W. Kluge Scholar, Columbia Undergraduate Scholars Program (CUSP)

Publications

Blair ME, Cao GTH, **López-Nandam EH**, Veronese-Paniagua DA, Birchette MG, Kenyon M, Md-Zain BM, Munds R, Nekaris KAI, Nijman V, Roos C, Thach HM, Sterling EJ, Le MD. Molecular phylogenetic relationships and unveiling novel genetic diversity among slow and pygmy lorises, including resurrection of *Xanthonycticebus intermedius* (2023). *Genes* 14, 63. DOI: 10.3390/genes14030643

López-Nandam EH, Albright R, Hanson EA, Sheets EA, Palumbi SR (2023). Mutations in coral soma and sperm imply lifelong stem cell renewal and cell lineage selection. *Proceedings of the Royal Society B* 290:20221766. DOI: 10.1098/rspb.2022.1766

López-Nandam EH, Payne CY, Delbeek JC, Dunker F, Krol L, Larkin L, Lev K, Ross R, Schaeffer R, Yong S, Albright R (2022). Kinship and genetic variation in aquarium-spawned *Acropora hyacinthus* corals. *Frontiers in Marine Science* 9:961106. DOI: 10.3389/fmars.2022.961106

Bergeron LA, Besenbacher S, Turner TN, Versoza CJ, Wang R, Price AL, Armstrong E, Riera M, Carlson J, Chen H, Hahn MW, Harris K, Kleppe ASLNM, **López-Nandam EH**, Moorjani P, Pfeifer SP, Tiley GP, Yoder AD, Zhang G, Schierup MH (2022). The mutationathon highlights the importance of reaching standardization in estimates of pedigree-based germline mutation rates. *eLife* 11:e73577. DOI: 10.7554/eLife.73577

López EH & Palumbi SR (2020). Somatic mutations and genome stability maintenance in clonal coral colonies. *Molecular Biology and Evolution* 37:828-838. DOI: 10.1093/molbev/msz270

Thomas L*, **López EH***, Morikawa MK, Palumbi SR (2019). Transcriptomic resilience, symbiont shuffling, and vulnerability to recurrent bleaching in reef-building corals. *Molecular Ecology* 28:3371-3382. DOI: 10.1111/mec.15143
***equal contributors**

Thomas L, Rose NH, Bay RA, **López EH**, Morikawa MK, Ruiz-Jones LJ, Palumbi SR (2018). Mechanisms of thermal tolerance in reef-building corals across a fine-grained environmental mosaic: lessons from Ofu, American Samoa. *Frontiers in Marine Science* 4:434. DOI: 10.3389/fmars.2017.00434

Drew J, **López EH**, Gill L, McKeon M, Miller N, Steinberg M, Shen C, McClenachan L (2016). Collateral damage to marine and terrestrial ecosystems from Yankee whaling in the 19th century. *Ecology and Evolution.* 6:8181-8192. DOI: 10.1002/ece3.2542

Eastwood EK*, **López EH***, Drew JA (2016). Population connectivity measures of fishery-targeted coral reef species to inform marine reserve network design in Fiji. *Scientific Reports* 6:19318. DOI: 10.1038/srep19318
***equal contributors**

Reports

López EH, Eastwood E, Drew J (2017). Genetic connectivity among populations of lollyfish (*Holothuria atra*). In S. Mangubhai, W. Lalavanua and S.W. Purcell (eds.). Fiji's Sea Cucumber Fishery: Advances in Science for Improved Management. Wildlife Conservation Society. Report No. 01/17. Suva, Fiji. pp. 62–70.

Selected Presentations

López-Nandam EH, Payne CY, Delbeek JC, Dunker F, Krol L, Larkin L, Lev K, Ross R, Schaeffer R, Yong S, Albright R. Kinship and selection in aquarium-bred corals. Oral presentation online for the International Coral Reef Symposium. July 2022.

López-Nandam EH & Albright R. Kinship and selection in aquarium-bred corals. Oral presentation for Reef Futures Virtual. December 16, 2021. View on YouTube.

López-Nandam EH, Albright R, Hanson EA, Sheets EA, Palumbi SR. Resilience of coral organisms on the molecular level, and adaptation on the cellular level. Oral presentation online for the International Coral Reef Symposium. July 22, 2021.

López EH, Albright R, Palumbi SR. Asexual and sexual mutation inheritance in clonal coral colonies. Oral presentation online for the SMBE Fitch Symposium. View on YouTube. June 30, 2020.

López EH, Albright R, Palumbi SR. Genome integrity and the heritability of somatic mutation in clonal, colonial corals. Poster presentation online for The Allied Genetics Conference. View on FigShare. April 2020.

López EH & Palumbi SR. Somatic mutations and genome stability maintenance in clonal coral colonies. Poster presentation at the Society for Molecular Biology and Evolution in Manchester, England. July 22, 2019.

López EH & Palumbi SR. Patterns and frequency of variation among asexual clones in a long-lived coral species. Oral presentation at the American Genetics Association Presidential Symposium in Portland, OR. June 3, 2019.

López EH & Palumbi SR. Considering somatic mutations and genome maintenance capacity in colonial cnidarians. Poster presentation at the Society for Molecular Biology and Evolution in Yokohama, Japan. July 9, 2018.

López EH & Palumbi SR. Uncovering within-colony coral diversity using high-throughput sequencing data. Oral presentation at the International Coral Reef Symposium in Honolulu, HI. June 20, 2016.

López EH, Le MD, Nguyễn TV, Dương HT, Cao GTH, Sterling EJ, Blair ME. Inferring molecular phylogenetic relationships among slow lorises (genus *Nycticebus*) with mitochondrial DNA sequence data. Poster presentation at the XXV International Primatological Congress in Hanoi, Vietnam. August 15, 2014.

López EH & Drew JA. Comparative phylogeography of Indo-Pacific marine taxa presents idiosyncratic genetic connectivity patterns. Oral presentation at the Society for Conservation Biology Oceania Section Meetings in Suva, Fiji. July 9, 2014.

Invited and Public Talks

"Coral Regeneration Lab Update." Online talk for Cal Academy members. January 24, 2023.

"From variation in a colony to variation in populations: what SNPs tell us about coral biology." Invited talk at the Congress of the European Society for Evolutionary Biology. Prague, Czech Republic. August 16, 2022.

"Coral spawning, genomics, and hope for reefs." Public talk online for Cal Academy's NightSchool. June 2, 2022.

Fireside Chat for Cal Academy's Big Bang Gala, with Dr. Alison Gould and Dr. Shannon Bennett. April 28, 2022.

"Scales of genetic variation in corals, from clonal polyps to captive-bred populations " Invited seminar online for Iowa State University's Genetics, Development, and Cell Biology Department. April 5, 2022.

"Coral spawning, genomics, and hope for reefs." Public talk for Cal Academy's Members Month. March 22, 2022.

"Kinship and selection in aquarium-bred corals." Invited talk for Coral Reef Alliance online. August 4, 2021.

"Corals in a changing world." Guest lecture for the Summer Systematics Institute Seminar Series at California Academy of Sciences. San Francisco, CA. June 29, 2021.

"Why mutations matter for corals." Invited talk at California Academy of Sciences' Institute for Biodiversity Science and Sustainability Seminar Series online. September 24, 2020.

"Asexual and sexual somatic mutation inheritance in a colonial coral." Cnidarian Zoom Seminar. May 20, 2020.

"Paradise irradiated: The Marshall Islands 60 years after nuclear testing." Invited talk at The Explorers Club headquarters. New York, NY. March 17, 2019.

"From climate change to nuclear bombs: using genomics to understand wildlife responses to environmental change." Invited talk at The Explorers Club Northern California Chapter meeting. San Francisco, CA. May 25, 2018.

Moderator and organizer of the panel "Looking Forward: Marine Science & Policy in the New Administration." Hopkins Marine Station of Stanford University. March 1, 2017.

"Marine conservation and genetic connectivity of marine taxa in Fiji." Invited talk at the Global Vision International (GVI) Tovuto base on Nanuya Lai Lai, Fiji. August 5, 2014.

Selected Media

2022	Article in *San Francisco Examiner* about aquarium-bred corals at California Academy of Sciences
2022	Press release from Cal Academy about coral spawning collaboration with Roatán Marine Park
2021	Article in *San Francisco Chronicle* about coral spawning at California Academy of Sciences
2021	Press release from Cal Academy about being selected for Forbes 30 Under 30 in Science
2020	Meet Elora López-Nandam, profile in *STANFORD Magazine*
2019	Twitter thread on our coral bleaching paper in *Molecular Ecology*

2018 *High Tidings* blog post on Bikini Atoll research

2017 Appearance in Bikini Atoll segment of episode 2 of PBS' *Big Pacific*

2017 Quoted in *USA Today* about Bikini Atoll research

2016 Article in *The Atlantic* about Yankee whaling research

2016 Quoted in *Columbia Magazine* about Yankee whaling research

2014 I wrote a story about my undergraduate thesis research in Fiji for Columbia's website

Teaching Experience

2021- Mentor for gap year, undergraduate, and graduate students on various coral-related projects

2019-2020 Polygence Mentor
Mentored two high school students in Shanghai to design a research project in the Galápagos

Fall 2018 T.A. for Ecology of the Hawaiian Islands (BIO 116). Stanford Wrigley Field Program in Hawaii
Taught and supervised marine fieldwork techniques, gave three lectures

Spring 2018 T.A. for Evolution (BIOHOPK 85). Hopkins Marine Station of Stanford University
Led interactive discussion sections and molecular labs, gave one lecture

May 2016 Instructor for Stanford Science Circle Middle School Program
Gave two lectures: conservation biology and coral reef ecology

Winter 2016 T.A. for Evolution (BIO 143). Stanford University
Led discussion sections

Leadership and Service

2022- Scientific computing committee at-large member, California Academy of Sciences

2019 Mentor, EEB Mentor Match Program

2018-2019 President, Hopkins Marine Station Graduate Student Organization (HMSGSO)

2017-2019 Mentor, Salinas High School Marine Biology Internships at Hopkins Marine Station

2016-2018 Student Liaison, Monterey Area Research Institutions Network for Education (MARINE)

2016-2018 Secretary, Hopkins Marine Station Graduate Student Organization (HMSGSO)

2015-2019 NSF GRFP Mentor, Stanford University

2015-2016 Biology Eco-Evo Graduate Student Seminar Speaker Committee, Stanford University

Certifications

AAUS Scientific Diver

CPR/First Aid