

ANDREW P. NOSAL, PH.D. (HE/HIM/ÉL)University of San Diego | 5998 Acalá Park, San Diego, CA 92110 | anosal@sandiego.edu**EDUCATION**

- 2013 **Doctor of Philosophy (Ph.D.) in Marine Biology**
Scripps Institution of Oceanography, UC – San Diego, La Jolla, CA, USA
- 2007 **Bachelor of Science (B.S.) in Biology with High Distinction (Honors)**
Concentration in Environmental and Biological Conservation
University of Virginia, Charlottesville, VA, USA

TEACHING POSITIONS AND COURSES TAUGHT**2017 – Adjunct Assistant Professor (FT)**

- Pres. *Department of Environmental & Ocean Sciences, University of San Diego, San Diego, CA, USA*
- INST 352 Religion and Revolutionary Science (Su20)
 - INST 458 Science Communication: Psychology and Environmental Literacy (S20)
 - EOSC 495 Senior Seminar (F20, S21, F21)
 - EOSC 438 Animal Behavioral Ecology Lecture and Lab (S18, S19, S21)
 - EOSC 300 Environmental Issues Lecture (S18, F18, S19, F19, S20, F21)
 - EOSC 220 Introduction to Atmospheric and Ocean Sciences Lab (F17, S18, F18, S19, F19)
 - EOSC 123 Organisms and Ecosystems Lecture and Lab (F17, F18, F19, S20, F20, F21)
 - EOSC 121 Life in the Ocean Lecture and Lab (F17)

2016 – Adjunct Assistant Professor (FT)

- 2017 *Department of Natural Sciences, University of Saint Katherine, San Marcos, CA, USA*
- BIO 100 Natural World: Biology Lecture (F16)
 - CHE 100 Natural World: Chemistry Lecture (S17)
 - BIO 105 Introductory Biology I Lecture and Lab (F16)
 - BIO 110 Introductory Biology II Lecture and Lab (S17)
 - BIO 305 Human Anatomy & Physiology I Lecture (F16)
 - BIO 310 Human Anatomy & Physiology II Lecture (S17)

2011 – Adjunct Professor (PT)

- 2016 *Department of Biology, University of San Diego, San Diego, CA, USA*
- BIOL 225 Introduction to Cellular Processes Lecture (S13)
 - BIOL 225L Introduction to Cellular Processes Lab (F11, S12, F12, F14, S15, F15, S16)
 - BIOL 221L Introduction to Organismal Diversity Lab (S11, F13, S14)
- Department of Biology, MiraCosta College, Oceanside, CA, USA*
- BIO 101 General Biology Lecture (S11)

RESEARCH POSITIONS**2016 – Visiting Assistant Researcher**

- Pres. Scripps Institution of Oceanography, UC – San Diego, La Jolla, CA, USA

2016 – IUCN Shark Specialist Group (SSG) Member – Northeast Pacific Region

- Pres. International Union for Conservation of Nature (IUCN) Species Survival Commission (SSC)

2013 – DeLaCour Postdoctoral Fellow in Ecology and Conservation

- 2016 Birch Aquarium and Scripps Institution of Oceanography, UC – San Diego, La Jolla, CA, USA

- 2008 **NSF IGERT Visiting Scientist** (*Project: Survey of Artisanal Shark Fisheries in Northern Chile*)
Oceana – South America, Santiago, Chile

RESEARCH FELLOWSHIPS

2013	DeLaCour Postdoctoral Fellowship in Ecology and Conservation	\$150,000
2007	NSF Graduate Research Fellowship Program (GRFP)	\$121,500
2007	NSF Integrative Graduate Education and Research Traineeship (IGERT)	\$97,000

SCIENTIFIC (PEER-REVIEWED) PUBLICATIONS

- 2021 Wegner NC, Portner EJ, Nguyen A, Bellquist L, **Nosal AP**, Pribyl AL, Stierhoff KL, Fischer P, Franke K, Vetter RD, Hastings PA, Semmens BX, Hyde JR. "Post-release survival and prolonged sub-lethal effects of capture and barotrauma on deep-dwelling rockfishes (genus *Sebastes*): Implications for fish management and conservation." *ICES Journal of Marine Science*: in press.
- 2021 **Nosal AP**, Cartamil DP, Ammann AJ, Bellquist LF, Ben-Aderet NJ, Blincow KM, Burns ES, Chapman ED, Freedman RM, Klimley AP, Logan RK, Lowe CG, Semmens BX, White CF, Hastings PA. "Triennial migration and philopatry in the critically endangered soupfin shark (*Galeorhinus galeus*)." *Journal of Applied Ecology* (doi: 10.1111/1365-2664.13848).
*Featured as *Editor's Choice* by the *Journal of Applied Ecology* with Open Access
- 2020 Doane MP, Morris MM, Papudeshi B, Allen L, Pande D, Haggerty JM, Johri S, Turnlund AB, Peterson M, Kacev D, **Nosal AP**, et al. "The skin microbiome of elasmobranchs follows phyllosymbiosis, but in teleost fishes, the microbiomes converge." *Microbiome* 8: 93.
- 2019 **Nosal AP**, Cartamil DC, Lam C, Wegner NC, Hastings PA. "Movement ecology of young-of-the-year blue sharks (*Prionace glauca*) and shortfin makos (*Isurus oxyrinchus*) within a putative binational nursery area." *Marine Ecology Progress Series* 623: 99 – 115.
- 2017 Ketchum JT, Slager CJ, Buckhorn ML, **Nosal AP**, Klimley AP. "Residency and long-distance movements of sevengill sharks (*Notorhynchus cepedianus*) tagged in San Francisco Bay. *Animal Biotelemetry* 5(26): 1 – 9. doi:10.1186/s40317-017-0141-z
- 2017 Ho C, Joly K, **Nosal AP**, Lowe CG, Clark CM. "Predicting coordinated group movements of sharks with limited observations using AUVs." *Proceedings of the Association for Computing Machinery Symposium on Applied Computing*: 289 – 296. doi:10.1145/3019612.3019711
- 2016 **Nosal AP**, Chao Y, Farrara JD, Chai F, Hastings PA. "Olfaction contributes to pelagic navigation in a coastal shark." *PLoS ONE* 11(1): e0143758. doi:10.1371/journal.pone.0143758
- 2016 **Nosal AP**, Keenan EA, Hastings PA, Gneezy A. "The effect of background music in shark documentaries on viewers' perceptions of sharks." *PLoS ONE* 11(8): e0159279. doi:10.1371/journal.pone.0159279
- 2015 Barker AM, **Nosal AP**, Lewallen EA, Burton RS. "Genetic structure of leopard shark (*Triakis semifasciata*) populations along the Pacific coast of North America." *Journal of Experimental Marine Biology and Ecology* 472: 151 – 157.
- 2014 **Nosal AP**, Caillat A, Kisfaludy EK, Royer MA, Wegner NC. "Aggregation behavior and seasonal philopatry in male and female leopard sharks (*Triakis semifasciata*) along the open coast of southern California, USA." *Marine Ecology Progress Series* 499: 157 – 175.
- 2013 **Nosal AP**, Lewallen EA, Burton RS. "Multiple paternity in leopard shark (*Triakis semifasciata*) litters sampled from a predominantly female aggregation in La Jolla, California, USA." *Journal of Experimental Marine Biology and Ecology* 446: 110 – 114.
- 2013 **Nosal AP**, Cartamil DC, Long JW, Lührmann M, Wegner NC, Graham JB. "Demography and movement patterns of leopard sharks (*Triakis semifasciata*) aggregating near the head of a submarine canyon along the open coast of southern California, USA." *Environmental Biology of Fishes* 96: 865 – 878.

RESEARCH GRANTS

2021	Moore Family Foundation	\$100,000
2018	University of San Diego Faculty Research Grant	\$2,500
2018	Moore Family Foundation	\$300,000
2016	Link Family Foundation	\$22,800
2014	Moore Family Foundation	\$300,000
2014	Save Our Seas Foundation	\$4,500
2010	SeaWorld and Busch Gardens Conservation Fund	\$10,000
2009	Project AWARE Foundation	\$9,467
2009	Scripps Environmental Advocates	\$14,800
2009	PADI Foundation	\$3,000
2007 – Present	Other Private Research Grants	\$111,150

ORAL PRESENTATIONS AT CONFERENCES

- 2019 **Nosal AP**, Cartamil DP, Lam CH, Bellquist LF, Blincow KM, Burns ES, Ben-Aderet NJ, White CF, Logan RK, Freedman RM, Lowe CG, Semmens BX, Hastings PA. “Triennial philopatry in the Eastern North Pacific soupfin shark (*Galeorhinus galeus*).” *35th Meeting of the American Elasmobranch Society, Joint Meeting of Ichthyologists and Herpetologists, Snowbird, UT*
- 2018 **Nosal AP**, Cartamil DP, Lam CH, Bellquist LF, Ben-Aderet NJ, White CF, Logan RK, Freedman RM, Lowe CG, Semmens BX, Hastings PA. “Movement Ecology of the Soupfin Shark (*Galeorhinus galeus*) in the Eastern North Pacific II.” *3rd Sharks International Conference, João Pessoa, Paraíba, Brazil*
- 2017 **Nosal AP**, Cartamil DP, Lam CH, Bellquist LF, Ben-Aderet NJ, White CF, Logan RK, Freedman RM, Lowe CG, Semmens BX, Hastings PA. “Movement Ecology of the Soupfin Shark (*Galeorhinus galeus*) in the Eastern North Pacific I.” *4th International Conference on Fish Telemetry, Cairns, Queensland, Australia*
- 2016 **Nosal AP**, Cartamil DC, Lam C, Wegner NC, Hastings PA. “Movement ecology of juvenile blue (*Prionace glauca*) and shortfin mako sharks (*Isurus oxyrinchus*) off southern California and Baja California, Mexico.” *32nd Annual Meeting of the American Elasmobranch Society, Joint Meeting of Ichthyologists and Herpetologists, New Orleans, LA*
- 2015 **Nosal AP**, Yanagitsuru Y, Hyde JR, Hastings PA, Wegner NC. “Hypoxia tolerance in the bocaccio rockfish (*Sebastes paucispinis*).” *94th Annual Meeting of the American Society of Ichthyologists and Herpetologists, Joint Meeting of Ichthyologists and Herpetologists, Reno, NV*
- 2014 **Nosal AP**, Hastings PA. “Shoreward homing in experimentally displaced leopard sharks (*Triakis semifasciata*).” *30th Annual Meeting of the American Elasmobranch Society, Joint Meeting of Ichthyologists and Herpetologists, Chattanooga, TN*
- 2014 **Nosal AP**, Hastings PA. “Shoreward homing in experimentally displaced leopard sharks (*Triakis semifasciata*).” *2nd Sharks International Conference, Durban, KZN, South Africa*
- 2013 **Nosal AP**, Keenan EA, Gneezy A. “Happy and playful sharks? The effect of background music in nature documentaries on viewers’ perception of and willingness to protect sharks.” *29th Annual Meeting of the American Elasmobranch Society, Joint Meeting of Ichthyologists and Herpetologists, Albuquerque, NM*
- 2012 **Nosal AP**, Lewallen EA, Burton RS. “Low incidence of multiple paternity in leopard sharks (*Triakis semifasciata*) sampled from a predominantly female aggregation.” *28th Annual Meeting of the American Elasmobranch Society, World Congress of Herpetology, Vancouver, BC, Canada*

- 2011 **Nosal AP**, Caillat A, Kisfaludy EK, Royer MA, Wegner NC. “Aggregation behavior of the leopard shark (*Triakis semifasciata*) at the head of La Jolla Submarine Canyon, La Jolla, California, USA.” *27th Annual Meeting of the American Elasmobranch Society, Joint Meeting of Ichthyologists and Herpetologists, Minneapolis, MN*
(Award for Best Student Oral Presentation)
- 2011 **Nosal AP**, Caillat A, Kisfaludy EK, Royer MA, Wegner NC. “Aggregation behavior of the leopard shark (*Triakis semifasciata*) at the head of La Jolla Submarine Canyon, La Jolla, California, USA.” *1st International Conference on Fish Telemetry, Sapporo, Hokkaido, Japan*
(Award for Best Student Oral Presentation)

SCIENCE COMMUNICATION AWARDS

- 2015 **iBiology Young Scientist Seminar (YSS) Competition**
Sponsored by the Lasker Foundation and the Alan Alda Center for Communicating Science
- 2011 **Best Student Oral Presentation Award**
29th Annual Meeting of the American Elasmobranch Society, Minneapolis, MN, USA
- 2011 **Best Student Oral Presentation Award**
1st International Conference on Fish Telemetry, Sapporo, Hokkaido, Japan

TEACHING, MENTORING, AND SCIENCE COMMUNICATION DEVELOPMENT

- 2021 **Pod Participant: Unlearning Racism in Geoscience (URGE)**, *University of San Diego*
- 2021 **Workshop Participant: “Advising Students of Color”**, *Center for Educational Excellence, University of San Diego, San Diego, USA*
- 2018 **Workshop Participant: “Engaging Pedagogies: Strategies to Encourage Mastery”**, *Center for Educational Excellence, University of San Diego, San Diego, USA*
- 2017 **Workshop Chair: “Personal Branding: Defining Your Purpose and Promise, Advancing Your Career”**, *SACNAS National Diversity in STEM Conference, Salt Lake City, UT, USA*
- 2016 **Workshop Panelist: “Science Communication: Becoming a Public Voice, Advancing Your Career”**, *SACNAS National Diversity in STEM Conference, Long Beach, CA, USA*
- 2016 **Workshop Coach: “Improvisation for Scientists”**, *University of California – San Francisco, San Francisco, CA, USA*
- 2015 **Workshop Participant: “Inclusive Education Workshop Series: Enhancing the Learning Environment for Students with Learning Disabilities using Universal Design for Learning (UDL)”**, *Center for Inclusion and Diversity, University of San Diego, San Diego, CA USA*
- 2015 **Workshop Participant: “Improvisation for Scientists”**, *Alan Alda Center for Communicating Science, Stony Brook University, Stony Brook, NY, USA*
- 2013 **Workshop Participant: 20th Institute on Teaching and Mentoring**, *Compact for Faculty Diversity, Arlington, VA, USA*
- 2011 **Workshop Participant: 18th Institute on Teaching and Mentoring**, *Compact for Faculty Diversity, Atlanta, GA, USA*
- 2009 **Workshop Participant: 16th Institute on Teaching and Mentoring**, *Compact for Faculty Diversity, Arlington, VA, USA*
- 2008 **NSF Communicating Ocean Sciences to Informal Audiences (COSIA) Course**
Scripps Institution of Oceanography, La Jolla, CA, USA

INVITED ACADEMIC SEMINARS AND COURSE GUEST LECTURES

- 2021 **“Improvisation for Scientists and Communicating Science to the Public”**
SIO 295: Introduction to Marine Biodiversity, Conservation, Global Change (Graduate Course)
Scripps Institution of Oceanography, La Jolla, CA, USA
- 2019 **“Improvisation for Scientists and Communicating Science to the Public”**
SIO 295: Introduction to Marine Biodiversity, Conservation, Global Change (Graduate Course)
Scripps Institution of Oceanography, La Jolla, CA, USA
- 2018 **“Improvisation for Scientists and Communicating Science to the Public”**
SIO 295: Introduction to Marine Biodiversity, Conservation, Global Change (Graduate Course)
Scripps Institution of Oceanography, La Jolla, CA, USA
- 2017 **“Public Perception, Science Communication, and Shark Conservation”**
SIO 295: Introduction to Marine Biodiversity, Conservation, Global Change (Graduate Course)
Scripps Institution of Oceanography, La Jolla, CA, USA
- 2016 **“Local Legends: Movement Ecology of Leopard Sharks off La Jolla, California”**
Aquarium of the Pacific Guest Speaker Series, Long Beach, CA, USA (<http://bit.ly/2nwOVu6>)
- 2016 **“Movement Ecology of the Leopard Shark off La Jolla, CA”**
SIO 188: Biology of Fishes (Undergraduate Course)
Scripps Institution of Oceanography, La Jolla, CA, USA
- 2015 **“Elasmobranch Coastal Policy and Conservation.”**
SIO 295: Introduction to Marine Biodiversity and Conservation (Graduate Course)
Scripps Institution of Oceanography, La Jolla, CA, USA
- 2015 **“Not Just on Vacation: Why Leopard Sharks Hang Out In La Jolla.”**
iBiology Young Scientist Seminar (YSS) Series (<https://bit.ly/2JKOKq8>)
- 2015 **“Behavioral Ecology of the Leopard Shark (*Triakis semifasciata*) in La Jolla, California.”**
Evening Lecture Series, Saint Katherine College, San Marcos, CA, USA
- 2014 **“Protecting Sharks: Documentary Music and Viewers’ Perceptions”**
Center for Marine Biodiversity and Conservation (CMBC) Brown Bag Lecture Series
Scripps Institution of Oceanography, La Jolla, CA, USA
- 2014 **“Behavioral Ecology of the Leopard Shark (*Triakis semifasciata*) in La Jolla, California.”**
Ecology Seminar Series, Scripps Institution of Oceanography, La Jolla, CA, USA
- 2014 **“Sharks and Rays: Biodiversity and Conservation.”**
SIO 295: Introduction to Marine Biodiversity and Conservation (Graduate Course)
Scripps Institution of Oceanography, La Jolla, CA, USA
- 2014 **“Behavioral Ecology of the Leopard Shark (*Triakis semifasciata*) in La Jolla, California.”**
Coastal and Marine Institute Seminar Series, San Diego State University, San Diego, CA, USA
- 2013 **“Shark Conservation: Safeguarding the Future of Our Oceans.”**
Jeffrey B. Graham Perspectives on Ocean Sciences Lecture Series, Birch Aquarium at Scripps,
La Jolla, CA, USA (<http://bit.ly/1DWxdhy>)
- 2013 **“Demography, movement patterns, and mating system of leopard sharks (*Triakis semifasciata*) aggregating along the open coast of southern California, USA.”**
Biology Department Seminar Series, University of San Diego, San Diego, CA, USA
- 2013 **“Shark Conservation: Safeguarding the Future of Our Oceans.”**
San Diego Zoo Institute for Conservation Research Seminar Series, Escondido, CA, USA

- 2012 **“Local Legends: The Leopard Sharks of La Jolla Shores.”**
Jeffrey B. Graham Perspectives on Ocean Sciences Lecture Series, Birch Aquarium at Scripps, La Jolla, CA, USA (<http://bit.ly/1Dflygt>)
- 2012 **“Sharks at the End of the Line.”**
*Tijuana River National Estuarine Research Reserve Saturday Speaker Series
 Imperial Beach, CA, USA*

PROFESSIONAL SERVICE

- 2021 – **Equity and Diversity Committee Member**
 Pres. *American Elasmobranch Society*
- 2012 – **Chair of Judging Committee for Gruber Award for Outstanding Student Oral Presentation**
 Pres. *American Elasmobranch Society*
- 2009 – **Editorial Peer Reviewing**
 Pres. *Conservation Biology* *Bulletin of the Southern California Academy of Sciences*
PLOS ONE *BioMed Central Research Notes*
Aquatic Biology *Marine and Freshwater Research*
Copeia *Marine Ecology Progress Series*
California Fish and Game
International Union for the Conservation of Nature (IUCN)
Journal of Experimental Marine Biology and Ecology
Frontiers in Marine Science
- 2014 – **Center for Marine Biodiversity and Conservation (CMBC) Steering Committee Member**
 2016 *Scripps Institution of Oceanography, La Jolla, CA, USA*
- 2010 – **Conference and Online Store Manager**
 2013 *American Elasmobranch Society*

COMMUNITY ENGAGEMENT AND OUTREACH

- 2017 – **Assistant Regional Director, National Ocean Science Bowl (NOSB)**
 Pres. Annual high school competition hosted by the University of San Diego
- 2013 – **Volunteer SCUBA Diver at Birch Aquarium**
 Pres. Live underwater cleaning, feeding, and education performances
- 2008 – **Media Consulting (>150 print and broadcast news interviews):**
 Pres. Associated Press FOX, CW, NBC, CBS, ABC, KUSI, CBSN
 New York Times National Public Radio (NPR)
 Los Angeles Times Al Jazeera International
 Washington Post Discovery News
 San Diego Union-Tribune New York One News (NY1)
 North County Times Central Coast Public Radio (KPBX)
 Christian Science Monitor The Hill
 La Jolla Light Women’s Health Magazine
- On-Camera Contributions:*
 “Solved: Nature’s Greatest Mysteries” Documentary Series – Animal Planet
 “When Sharks Attack” Documentary Series – National Geographic
 “Shocking Sharks” Documentary – National Geographic
 “Lifeguard!” Documentary Series – The Weather Channel
 “Sky Sharks” Documentary – National Geographic

2011 – Other Consulting

Pres. San Diego Lifeguard Services Long Beach Aquarium of the Pacific
Banning LLP San Diego County Medical Examiner

2008 – Invited Speaker

Pres. California Academy of Sciences Breakfast Club Livestream Speaker Series (2021)
Bolsa Chica Conservancy ExperTalk Series (2021)
Torrey Pines Conservancy (2021)
USD Summer Undergraduate Research Experience (SURE) Program (2021)
Solana Santa Fe Elementary (2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021)
Boy Scout Troop 88, Bridgewater, NJ (2021)
InterpreTEEN High School Internship Program, Birch Aquarium (2013, 2014, 2015, 2016, 2017)
Mount Miguel High School (2010, 2017)
Rancho Santa Fe School (2010, 2011, 2012, 2013, 2016)
Sierra Club San Diego (2016)
Aldo Leopold Charter School (2009, 2010, 2011, 2012, 2013, 2014, 2015)
Exploring Ocean STEM Careers at the Birch Aquarium (2015)
Torrey Pines Docent Society (2015)
Cabrillo National Monument (2014)
Better Education for Women in Science and Engineering (BE WiSE; 2013)
St. Joseph Academy (2013)
El Cajon Valley High School (2012)
Torrey Pines High School (2010, 2012)
Temecula Valley High School (2009)
La Jolla Elementary School (2009)
San Diego County Libraries (2009)
California State Summer School for Mathematics and Science (COSMOS; 2008)
Southwest Marine Educators Association (SWMEA; 2008)

2008 – Tour Guide for Scripps Community Outreach Program for Education (SCOPE)

2016 Walking tours of Scripps Institution of Oceanography and snorkeling tours with leopard sharks

2008 – Moderator and Science Judge for National Ocean Science Bowl (NOSB)

2012 Annual high school competition hosted by the Birch Aquarium