
Contact

Chelsea Gray | **Email:** GrayChelsea13@gmail.com | **Phone:** +1 (703) 594-1581 | **Website:** DivingwSharks.com

Summary

I am an interdisciplinary researcher, with experience in social science, individual-based modeling, and policy development. My PhD research includes an individual-based model of endangered basking sharks in Ireland, assessing model use in policy at an international level (publication under review), and qualitative research on communication of scientific results for policy development. I am a practicing science communicator and have experience with different audiences, including students, policymakers, and the general public, and with diverse mediums, including video editing, social media outreach, and in-person presentations. I speak intermediate Irish and am proficient in R and Netlogo.

Education

PhD, Environmental Science and Policy, 2023. George Mason University, Fairfax, VA.

Dissertation: *An Individual-based Model of Basking Sharks as a Case Study of Model Communication for Policy*

M.S., Environmental Science and Policy, 2019. George Mason University, Fairfax, VA

Thesis: *Public Perceptions of Basking Sharks in Donegal, Ireland*

B.S., Biology, 2013. University of Mary Washington (UMW), Fredericksburg, VA

Professional Experience

Knauss Fellow, (February 2024-Current), NOAA NMFS Office of International Affairs Trade and Commerce

- Assess and implement legislative initiatives on policies and activities affecting fisheries and oceanic programs, such as the Moratorium Protection Act and Maritime SAFE Act.
- Analyze legislation for impacts on a program or administration goals and developing reports. Provide technical drafting assistance to congressional representatives.
- Collect international data on IUU fishing, conservation measures, and RFMO compliance.
- Assist with the planning and implementation of bilateral and multilateral meetings between the USA and other nations to address the management of shared resources.
- Develop correspondence or responses to congressional and inter-agency inquiries.
- Assist with the development of US positions and proposals at international fisheries agreement meetings.

Researcher and Science Communicator (August 2018-present), Irish Basking Shark Group

- Collaborate with international researchers on basking shark research and policy.
- Create bilingual content for social media outreach and science communication.
- Use social media to track basking shark sightings and request users report them.
- Assist in the development of press releases related to basking shark conservation and policy, respond to media inquiries on behalf of the IBSG, represent the group in radio/podcast interviews.
- Assisted a year-long national “Save our Shark” campaign with the promotion of a 12,900-signature petition to protect basking sharks Under the Wildlife Act of 1976 (legislation passed in Oct. 2022).
- Respond to government inquiries for comment or scientific advice, such as the submission to Department of Housing, Local Government and Heritage Public Consultation on the MPA Advisory Group’s Report.

President (January 2021- 2022), **Vice President** (January 2020-2021), **Secretary** (February 2018-December 2019), Conservation Marketing Working Group, Society of Conservation Biology

- As president, raised enough funds to increase the treasury by 450%.
- Organized two international conferences (one in-person, one virtual) with over 200 attendees and speakers.
- Managed communications related to conference planning and elections.
- Update and maintain <http://www.consmark.org>.

- Led creation of multi-year development plans and strategic goals.

The Commonwealth of Virginia Engineering & Science (COVES) Fellowship, Virginia Academy of Science Engineering and Medicine, Richmond VA, 23219 (Summer 2021)

- Served as a science advisor for State Delegate Rodney Willett.
- Distilled complex research into 1-3 achievable policy goals for the upcoming legislative session.
- Research diverse environmental and social issues that impact the Commonwealth.
- Wrote responses to constituent concerns regarding diverse policy issues.
- Provided recommendations on current and future legislation as well as funding.

Graduate Teaching Assistant, George Mason University, Fairfax VA 22031 (2016-2023)

- Taught entry level and high-level Environmental Science Labs.
- Designed scientific writing lessons and activities. Assisted in development of lab manuals and activities.
- Awarded “Best Graduate Student Teacher” in 2019 and “Honorable Mention” in 2017.

Research Assistant Potomac Environmental Research and Education Center, George Mason University, Fairfax VA 22031 (August 2014-2023)

- Assist with data collection on Potomac River watersheds.
- Identify and count zooplankton samples.

Website Manager, Potomac Environmental Research and Education Center, George Mason University, Fairfax VA 22031 (August 2014-2023)

- Redesigned PEREC website, Perc.Gmu.Edu.
- Create content for PEREC Facebook and website, such as and blogs.
- Create short videos of students and faculty about their research.
- Run social media (Twitter, Facebook, blog posts) related to PEREC research, teaching, and events.

Scientific Interpreter, PEREC, George Mason University, Fairfax VA 22031 (*Seasonal position*, September-November 2014; April-May 2015)

- Run scientific stations for middle school children at local watersheds.
- Help students collect data and gain meaningful scientific experience in 20-30 minute rotations.

Sales Associate/Webmaster, Centreville Aquarium, Centreville, VA (May 2008- 2016)

- Maintain fish and tanks and assist customers with problems such as sick fish, faulty equipment and general questions regarding fish-keeping.
- Created and maintain website (Centrevilleaquarium.com), store blog, Facebook page and craigslist ads.
- Facebook likes grew from 184 to 421 followers. Centrevilleaquarium.com has an average of 70 unique page views a day.

Aquarist Intern (June 2012-August 2012), **Aquarist Volunteer** (May 2013-October 2013) National Aquarium in Washington D.C.

- Cared for fish in cold-water Pacific section. Prepared food, acclimated fish, and aided in veterinary care.
 - Maintained tanks and filtration equipment.
 - Wrote and gave educational talks and answered questions before/after the "shark feed".

Deck Hand, Sea Education Association, *Robert C. Seamans* (May 2012-June 2012)

- Helped prepare the 125-foot Brigantine for voyage (i.e. loading food, cleaning bunks).
- Worked on a 24/7 watch which included navigation and sail handling.
- Worked in the lab to gather and analyze data gathered via neuston tow, meter net, and CTD (Conductivity/Temperature/depth) device.

Freelance Writer and Editor, (July 2013-Present)

- Created content for websites and blogs, ranging in topics from law to healthcare.
- Edit novels, papers, and articles for grammar and content.

Publications

Gray, C., Rothman, D.S., Peters-Burton, E., Smith, C. & Parsons, E.C.M. (2022). Individual-Based Model Use in Marine Policy. *Journal of Integrative Environmental Sciences*, 20(1), 2271550. <https://doi.org/10.1080/1943815X.2023.2271550>.

Gray, C., Peters-Burton, E., Smith, C. & Parsons, E.C.M. (2022). Basking Shark Tourism in Donegal, Ireland - A Case-Study of Public Interest and Support for Shark Conservation. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 1–14. DOI: [10.1002/aqc.3774](https://doi.org/10.1002/aqc.3774).

Gray, C., Schuler, A. R., & Parsons. (2022). Recent Advances in Whale Watching Research: 2019–2020. *Tourism in Marine Environments*. <https://doi.org/10.3727/154427322X16497485866411>.

Conference Presentations

An Individual-Based Model of Basking Sharks in Ireland (July 2023). Oral presentation at the Joint Meeting of Ichthyologists and Herpetologists 2023. Norfolk, VA USA.

Assessing Individual-Based Model Use in Policy: Ensuring Your Model is Utilized (May 2023). Oral presentation at International Society for Ecological Modelling Global Conference 2023. Toronto Canada.

An Individual-Based Model of Basking Sharks in Ireland (May 2023). Poster presentation at International Society for Ecological Modelling Global Conference 2023. Toronto Canada. *[Won second place for student posters]*

Making a Difference: How to Realize Policy Change (October 2022). *Sharks International*. Valencia, Spain.

Keynote: Getting the Messenger Right (October 2021). *ConsMark 2021: Changing Behavior in a Changing Climate*. Online.

Empathy for People and Nature: An ingredient to achieving success in every environmental conservation journey (January 2021). *Mindful Conservation Conference*. Online.

Using Short Videos to Bring Attention to Cutting Edge Research (February 2018). *Virginia Sea Grant Graduate Symposium*. Glen Allen, Virginia.

Science Communication Materials

Videos

Gray, C. Director. (2021). “Watershed COVID-19 Monitoring at George Mason”. PEREC. https://www.youtube.com/watch?v=GBsSJoiWUFw&feature=emb_title.

Gray, C. Production Assistant. (2020). “Elasmo Week: Irish Basking Shark Group”. *Minorities in Shark Science*. <https://www.youtube.com/watch?v=KwB111oTTM8&t=3s>.

Gray, C. Director (2020). “Water Quality Mapping on the Potomac River”. PEREC. <https://www.youtube.com/watch?v=7doAwQHbps>.

Gray, C. Director. (2019). “First Generation Student Turned Researcher.” *Potomac Environmental Research and Education Center*. <https://youtu.be/k7yX4ZemXBI>.

Gray, C. Director. (2019). “Research Experience for Undergraduates- What can GMU students do?” *Potomac Environmental Research and Education Center*. <https://youtu.be/dzRZDP4sr-4>.

Gray, C., Parsons, C. Director. (2018). “Does Knowledge Affect Support for Shark Conservation?” *Ocean 180 Video Challenge*. <https://vimeo.com/263665427> [One of ten finalist for 2018 Ocean 180 Video Challenge].

Gray, C. Director. (2018). “Ocoquan River Clean Up.” *Potomac Environmental Research and Education Center*. <https://youtu.be/ry-6uDxKZYw>.

Gray, C. Director. (2018). “What’s in Our Water?” *Potomac Environmental Research and Education Center*. <https://youtu.be/iFh1flITcuc>.

Gray, C. Director. (2018). “Micropollutants in the Potomac River.” *Potomac Environmental Research and Education Center*. <https://youtu.be/cTpO-M2q4o8>.

Gray, C., Smith, C. Director. (2018). “What is PEREC?” *Potomac Environmental Research and Education Center*. <https://youtu.be/ry-6uDxKZYw>.

Gray, C. Director. (2017). “Zooplankton Net.” *Potomac Environmental Research and Education Center*. <https://youtu.be/6N6amA1pbjw>.

- Gray, C. Director. (2017). “Macroinvertebrates of the Potomac.” Potomac Environmental Research and Education Center. <https://youtu.be/kKvi7RqkQ6E>.
- Gray, C. Director. (2017). “Chemical Analysis of Water, Sediment, and Fish in the Potomac River.” Potomac Environmental Research and Education Center. <https://youtu.be/z0HZWJqQ9Rc>.
- Gray, C. Director. (2017). “Constructing the Potomac River Food Web.” Potomac Environmental Research and Education Center. <https://youtu.be/jRWMBKusqnE>.

Articles

- McInturf, A., **Gray, C.**, Griffin, D., Johnston, E. (2021) Irish Basking Shark Group (IBSG) submission to Department of Housing, Local Government and Heritage. Public Consultation on the MPA Advisory Group’s Report entitled “Expanding Ireland’s Marine Protected Area Network”. <https://www.baskingshark.ie/post/advocating-for-basking-sharks-using-science-to-inform-conservation-measures>.
- Gray, Chelsea. (2021). COVES: Serving as a Science Advisor. Engineers & Scientists Acting Locally. <https://www.esal.us/blog/coves-serving-as-a-science-advisor/>.
- Gray, Chelsea. Ireland’s “Best Kept” Secret (2020). *Irish Basking Shark Group*. <https://www.baskingshark.ie/post/irelands-best-kept-secrets>.
- Gray, Chelsea. (2017). “What’s at the bottom of the Potomac River?”. *Potomac Environmental Research and Educational Center*. <https://perec.science.gmu.edu/whats-at-the-bottom-of-the-potomac-river/>
- Gray, Chelsea. (2017). “Taking the pulse of a stream”. *Potomac Environmental Research and Educational Center*. <https://perec.science.gmu.edu/taking-the-pulse-of-a-stream/>.

Media Appearances

- This Gigantic Shark is a Huge Mystery (2024). *Sharks Unknown with Jasmin Graham*. PBS Digital Video. <https://www.pbs.org/video/this-gigantic-shark-is-a-huge-mystery-saqqdo/>.
- Wild About Basking Sharks with Chelsea Gray (2021). *Wild about Conservation*. <https://anchor.fm/wildaboutconservation/episodes/Wild-About-Basking-Sharks-with-Chelsea-Gray---S2-E11-e1a0r25>.
- Prince William Community Marine Debris Project Part 5: Collecting Plankton from a Retention Pond (2020). George Mason University Television. <https://www.youtube.com/watch?v=1UuWiuEn04s>.
- Elasmo Week Live Q & A. (2020). *Minorities in Shark Science*. <https://www.youtube.com/watch?v=GP7mBO2sfHs>.
- Graduate School in Conservation and Sciences (2020). *The Guide to Mindful Conservation: Dancing In Pink Hiking Boots*. <https://pinkboots.libsyn.com/graduate-school-in-conservation-and-sciences-advice>.
- Using Nature To Heal Traumatic Experiences (2020). *The Guide to Mindful Conservation: Dancing In Pink Hiking Boots*. <https://pinkboots.libsyn.com/using-nature-to-heal-traumatic-experiences>.
- Protecting the Safety of Women Within Academia with Chelsea Gray (2020). *Speak Up for Blue*, Episode 971. <https://www.radio.com/media/audio-channel/sufb-971-protecting-the-safety-of-women-within-academia-with-chelsea-gray>.
- Record High Temperatures for the Decade (2020). *Marine Conservation Happy Hour*, Episode 160. <https://marineconservationhappyhour.libsyn.com/mchh-160-record-high-temperatures-for-the-decade>.
- Social Science Field Work in Ireland with Chelsea Gray (2019). *Marine Conservation Happy Hour*, Episode 92. <https://marineconservationhappyhour.libsyn.com/mchh-92-social-science-field-work-in-ireland-with-chelsea-gray>.
- Viability of Basking Shark Ecotourism with Chelsea Gray (2019). *Marine Conservation Happy Hour*, Episode 92. <https://marineconservationhappyhour.libsyn.com/mchh-93-viability-of-basking-shark-ecotourism-with-chelsea-gray>.

Fellowships and Awards

- Knauss Fellowship (2024-2025), NOAA Sea Grant
- Summer Research Fellowship (2023), George Mason University (\$8,000)
- Doctoral Research Scholars (2022-2023), George Mason University (\$18,000) [*declined*]
- Team Science Training (2023), Virginia Sea Grant (\$400)
- Oskar Morgenstern Fellowship (2022-2023). Mercatus Center, George Mason University. (\$2,500)
- Freshwater Ecology Research Fund at PEREC (2022). George Mason University. (\$1,500)
- International Women's Fishing Association Scholarship Trust (2022). (\$3,000)
- Frédéric Bastiat Fellowship (2021-2022). Mercatus Center, George Mason University (\$2,500)
- Don Lavoie Fellowship (2021). Mercatus Center, George Mason University. (\$1,250)
- “Best Graduate Student Teacher” (2019). College of Science, George Mason University. Received “Honorable Mention” in 2017