

# Camrin D. Braun

Applied Physics Laboratory  
University of Washington  
Seattle, WA 98105 USA

+1 206 685 4050  
cbraun@apl.uw.edu  
www.camrinbraun.com

## EDUCATION

- Ph.D. Massachusetts Institute of Technology** Cambridge, MA  
**Woods Hole Oceanographic Institution** Woods Hole, MA  
*Biological Oceanography, MIT-WHOI Joint Program in Oceanography* Aug 2018  
Dissertation title: Oceanographic drivers of large pelagic fish movements in the North Atlantic Ocean. *Advisor: Dr. Simon Thorrold*
- M.Sc. King Abdullah University of Science and Technology** Thuwal, KSA  
*Marine Science and Engineering, Red Sea Research Center* July 2013  
Thesis title: Movement ecology of *Manta alfredi* in the eastern Red Sea.  
*Advisor: Dr. Michael Berumen*
- B.Sc. The College of Idaho** Caldwell, ID  
*Environmental Studies and Conservation Biology, Summa cum laude* May 2011  
Honors thesis title: Movements of juvenile whale sharks (*Rhincodon typus*) in the Red Sea. *Advisors: Dr. Chris Walser, Dr. Rochelle Johnson*

## PROFESSIONAL EXPERIENCE

- 2018-present **Postdoctoral Research Associate:** Applied Physics Laboratory, University of Washington, Seattle, WA USA. *Advisor: Dr. Peter Gaube.*
- 2018-present **Guest Investigator:** Institute of Marine Research, Department of Oceanography and Fisheries, University of the Azores, Horta, Portugal.
- 2013-2018 **Graduate Student:** Earth, Atmospheric and Planetary Sciences Department (MIT) and Biology Department (WHOI), Massachusetts Institute of Technology-Woods Hole Oceanographic Institution Joint Program in Oceanography, Woods Hole, MA, USA. *Advisor: Dr. Simon Thorrold.*
- 2012-2013 **Graduate Student:** Red Sea Research Center, King Abdullah University of Science and Technology, Thuwal, Saudi Arabia. *Advisor: Dr. Michael Berumen.*
- 2011-2012 **Research Assistant I:** Fish Ecology Lab, Biology Department, Woods Hole Oceanographic Institution. *Advisor: Dr. Simon Thorrold.*
- 2009-2011 **Undergraduate Researcher:** Environmental Studies Department, The College of Idaho. *Advisor: Dr. Chris Walser.*
- 2010 **Undergraduate Researcher:** NSF Research Experience for Undergraduates, Woods Hole Oceanographic Institution. *Advisors: Dr. Chris Walser and Dr. Simon Thorrold.*
- 2009 **Fisheries BioAide and Field Technician:** Anadromous Fish Program, Idaho Department of Fish and Game. *Supervisor: Chuck Warren.*

## RESEARCH GRANTS AND FELLOWSHIPS

2018-2021	<i>New Investigator Program</i> , NASA: "Developing a mechanistic understanding of the influence of (sub)mesoscale features on the distribution and behavior of pelagic predators." PI: P. Gaube, APL	\$381,387
2018-2021	<i>Biodiversity and Ecological Forecasting Program</i> , NASA: "Supporting climate-ready and sustainable fisheries: using satellite data to conserve and manage life in the ocean and support sustainable fisheries." PI: R. Lewison, SDSU	\$852,084
2017-2018	<i>The Explorers Club Rolex Exploration Grant</i> : "The Secret Life of the World's Largest Fish." PI: C. Braun, MIT-WHOI	\$10,000
2016-2018	<i>Earth and Space Science Fellowship</i> , NASA: "Investigating the influence of mesoscale physical/biological interactions on large pelagic predators: a synergistic analysis of shark behavior and satellite observations." Co-PIs: C. Braun, MIT-WHOI and S. Thorrold, WHOI	\$74,670
2016-2018	<i>Population Dynamics Fellowship</i> , NOAA Fisheries & Seagrant ( <i>declined</i> ): "Improved marine animal geolocation using hidden Markov models for data poor species." Co-PIs: C. Braun, MIT-WHOI and S. Thorrold, WHOI	\$78,434
2017	<i>Amazon Web Services Cloud Credits for Research Grant</i> , Amazon Web Services: "Developing predictive movement models for sharks in the open ocean." Co-PIs: C. Braun, MIT-WHOI and P. Gaube, APL-UW	\$16,848
2016-2017	<i>Ocean Ventures Fund</i> , Woods Hole Oceanographic Institution: "Mesoscale biophysical interactions drive large pelagic predators: a synergistic analysis of shark behavior and satellite observations." PI: C. Braun, MIT-WHOI	\$5,000
2016	<i>Steven Berkeley Marine Conservation Fellowship</i> , American Fisheries Society ( <i>runner-up</i> ): "Improved marine fish geolocation using hidden Markov models for data poor species." PI: C. Braun, MIT-WHOI	\$1,000
2015	<i>Martin Family Society of Fellows for Sustainability Fellowship</i> , Massachusetts Institute of Technology: "Human influence on pristine coral reefs and implications for management." PI: C. Braun, MIT-WHOI	\$60,000
2015	<i>John S. Hennessy Fellowship</i> , Massachusetts Institute of Technology: "Pristine coral reef foodwebs and implications for management." PI: C. Braun, MIT-WHOI	\$60,000
2015	<i>Grassle Fellowship</i> , Woods Hole Oceanographic Institution: "Eddy use by pelagic predators: biophysical interactions span trophic levels in the open ocean." PI: C. Braun, MIT-WHOI	\$10,000
2015	<i>Grants-in-Aid of Research</i> , Sigma Xi: "Human influence on pristine coral reefs and management implications." PI: C. Braun, MIT-WHOI	\$500
2015	<i>Summer Study Grant</i> , MIT Center for International Studies: "High seas pupping necessitates multinational cooperation over the world's largest fish." PI: C. Braun, MIT-WHOI	\$3,150
2014-2016	<i>Access to the Sea Grant</i> , Woods Hole Oceanographic Institution: "The RAFOS Ocean Acoustic Monitoring (ROAM) tag: A new tool for tracking marine megafauna." Co-PIs: C. Braun, MIT-WHOI and S. Thorrold, WHOI	\$54,712

2014	<i>Young Explorer Grant</i> , National Geographic: "Pelagic pupping, reproduction in the world's largest fish." PI: C. Braun, MIT-WHOI	\$5,000
2013	<i>Coastal Ocean Institute Grant</i> , Woods Hole Oceanographic Institution: "Pelagic pupping, reproduction in the world's largest fish." Co-PIs: C. Braun, MIT-WHOI and S. Thorrold, WHOI	\$1,500
2010-2011	<i>Student Research Grant</i> , The College of Idaho: "Movements of juvenile whale sharks in the Red Sea." PI: C. Braun, C of I	\$1,500

## HONORS AND AWARDS

2016	Outdoor 30 Under 30 Fellow
2012	King Abdullah University of Science and Technology Provost Award
2011	Graduated <i>Summa Cum Laude</i> at The College of Idaho
2011	The College of Idaho Nel Tobias Award
2011	The College of Idaho Scarab Award in recognition of academic excellence
2010	Research Experience for Undergraduates Fellowship, National Science Foundation & Woods Hole Oceanographic Institution.
2010	Abbott Award at The College of Idaho: "For scholarship, character, and effective participation in the life and work of the College."
2010	Outstanding Environmental Studies Student Award at The College of Idaho
2010	Best Poster in Ecology, Idaho Academy of Sciences Meeting
2007	Heritage Scholarship (4 years full tuition) at The College of Idaho
2007	Dean's Honors List at The College of Idaho, 11 of 12 semesters

## PEER-REVIEWED PUBLICATIONS

Arostegui M. C., **C. D. Braun**, P. Gaube. in press. Movement patterns and thermal niche of the first satellite tagged Mediterranean spearfish (*Tetrapturus belone*). *Fisheries Oceanography*.

Gaube P., **C. D. Braun**, A. Della Penna, G. L. Lawson, D. J. McGillicuddy Jr., G. B. Skomal, S. R. Thorrold. 2018. Mesoscale eddies influence white shark movements in the open ocean. *Scientific Reports* 8:7363.

**Braun C. D.**, B. Galuardi, S. R. Thorrold. 2018. HMMoce: An R package for improved geolocation of archival-tagged fishes using a hidden Markov method. *Methods in Ecology and Evolution* 9:1212–1220.

Sequeira A. M. M.,...**C. D. Braun**..., M. Thums. 2018. Convergence of marine megafauna movements patterns in coastal and open oceans. *Proceedings of the National Academy of Sciences* 115, 12.

**Braun C. D.**, G. B. Skomal, S. R. Thorrold. 2018. Integrating archival tag data and a high-resolution oceanographic model to estimate basking shark (*Cetorhinus maximus*) movements in the western Atlantic. *Frontiers in Marine Science* 5.

Skomal G. B., **C. D. Braun**, J. H. Chisholm, S. R. Thorrold. 2017. Movements of the white shark (*Carcharodon carcharias*) in the North Atlantic Ocean. *Marine Ecology Progress Series* 580: 1-16.

- Spaet J. L. Y., C. H. Lam, **C. D. Braun**, M. L. Berumen. 2017. Extensive use of mesopelagic waters by a Scalloped hammerhead shark (*Sphyrna lewini*) in the Red Sea. *Animal Biotelemetry* 5(1).
- Cochran J. E. M., R. S. Hardenstine, **C. D. Braun**, G. B. Skomal, S. R. Thorrold, K. Xu, M. G. Genton, M. L. Berumen. 2016. Population structure of a whale shark (*Rhincodon typus*) aggregation in the Red Sea. *Journal of Fish Biology* 89(3): 1570-1582.
- Coker D. J., **C. D. Braun**, J. Cavin, S. Payet, M. L. Berumen. 2016. Remote marine protected area reveals unusual social behavior in *Chaetodon trifascialis*. *Marine Biodiversity*: 1-2.
- Braun C. D.**, G. B. Skomal, S. R. Thorrold, M. L. Berumen. 2015. Movements of the reef manta ray (*Manta alfredi*) in the Red Sea using satellite and acoustic telemetry. *Marine Biology* 162(12).
- Braun C. D.**, M. B. Kaplan, A. Z. Horodysky, J. K. Llopiz. 2015. Satellite telemetry reveals physical processes driving billfish behavior. *Animal Biotelemetry* 3(1).
- Priest, M. A., G. R. Almany, **C. D. Braun**, R. J. Hamilton, D. F. Lozano-Cortés, et al. 2014. Isolation and characterization of 29 microsatellite markers for the bumphead parrotfish, *Bolbometopon muricatum*, and cross amplification in 12 related species. *Marine Biodiversity* 45(4): 861-866.
- Berumen M. L., **C. D. Braun**, J. E. M. Cochran, G. B. Skomal, S. R. Thorrold. 2014. Movement patterns of juvenile whale sharks tagged at an aggregation site in the Red Sea. *PLoS One* 9.
- Thorrold S. R., P. Afonso, J. Fontes, **C. D. Braun**, G. B. Skomal, M. L. Berumen. 2014. Extreme diving behavior in devil rays links surface waters and the deep ocean. *Nature Communications* 5.
- Braun C. D.**, G. B. Skomal, S. R. Thorrold, M. L. Berumen. 2014. Diving Behavior of the Reef Manta Ray Links Coral Reefs with Adjacent Deep Pelagic Habitats. *PLoS One* 9.
- Werry J. M., S. Planes, M. L. Berumen, K. A. Lee, **C. D. Braun**, E. Clua. 2014. Reef fidelity and migration of tiger sharks, *Galeocerdo cuvier*, across the Coral Sea. *PLoS One* 9.
- Walter R. T.,...**C. D. Braun**,...N. E. Hussey. 2013. First record of living *Manta alfredi* x *Manta birostris* hybrid. *Marine Biodiversity* 44: 1-2.
- Braun, C. D.** and C. A. Walser. 2011. The diet and distribution of largemouth bass (*Micropterus salmoides*) in the lower Boise River, Idaho. *Western North American Naturalist* 71(3): 316-326.

## PENDING PUBLICATIONS

- Braun C. D.**, P. Gaube, T. H. Sinclair-Taylor, G. B. Skomal, S. R. Thorrold. Mesoscale eddies act as conduits connecting pelagic predators to mesopelagic ecosystems. In preparation for submission to *Nature*, anticipated December 2018.
- Braun C. D.**,... G. B. Skomal, S. R. Thorrold. Mesopelagic diving and such. In preparation for submission to *Current Biology*, anticipated March 2019.
- Braun C. D.**, P. Gaube, P. Afonso, J. Fontes, G. B. Skomal, S. R. Thorrold. Oceanographic association, movements and connectivity of swordfish in the North Atlantic. In revision at *ICES Journal of Marine Science*.

Queiroz, N.,..., **C. D. Braun**,...D. W. Sims. Global spatial risk assessment of sharks under the footprint of fisheries. In review at *Nature*.

Cochran J. E. M., **C. D. Braun**, G. B. Skomal, S. R. Thorrold, M. L. Berumen. Acoustic telemetry reveals stark differences in residency behavior and movement ecologies among whale shark (*Rhincodon typus*) aggregations. In revision at *Marine Biology*.

DiBattista J. D., P. Saenz-Agudelo, M. J. Piatek, E. F. Cagua, B. W. Bowen, J. H. Choat, L. A. Rocha, M. R. Gaither, J. P. Hobbs, T. H. Sinclair-Taylor, J. H. McIlwain, M. A. Priest, **C. D. Braun**, N. E. Hussey, S. T. Kessel, M. L. Berumen. Population genomic response to an environmental gradient by widespread and endemic fishes of the Arabian Peninsula. In revision at *Molecular Ecology*.

## INVITED TALKS AND SEMINARS

**Braun CD\***. 2017. Dynamic ocean management: A fish perspective. Invited oral presentation at NASA-World Resources Institute workshop on ocean health and fisheries, Washington, DC.

**Braun CD\***, Thorrold SR. 2017. The secret lives of sharks. Invited oral presentation at The Birches School, Lincoln, MA.

**Braun CD\***. 2017. Letters from a sinking ship. Invited oral presentation at National Geographic Society, Washington, DC.

**Braun CD\***, Thorrold SR. 2017. The secret lives of sharks. Invited oral presentation at National Geographic Society Family Day, Washington, DC.

**Braun CD\***, Thorrold SR\*. 2017. The science of JAWS. Invited oral presentation at Boston Symphony Orchestra, Lenox, MA.

**Braun CD\***, Thorrold SR. 2017. The secret lives of sharks. Invited oral presentation at Mullen Hall Elementary School, Falmouth, MA.

**Braun CD\***, Thorrold SR. 2016. The secret lives of sharks. Invited oral presentation at Science Made Public, Woods Hole, MA.

**Braun CD\***, Galuardi B, Thorrold SR. 2016. Improved marine animal geolocation using hidden Markov models. Invited oral presentation at WHOI Biology Department Seminar Series, Woods Hole, MA.

**Braun CD\***, Thorrold SR. 2015. Tracking sharks in a dynamic ocean. Invited poster presentation at MIT Museum's Nautical Nights, Cambridge, MA.

**Braun CD\***. Lost at sea: studying fish movements without gills of our own. 2015. Invited oral presentation at KAUST Winter Enrichment Program, Thuwal, KSA.

**Braun CD\***, Thorrold SR. 2014. Population and migratory connectivity in ocean ecosystems. Invited oral presentation at Yale School of Forestry and Environmental Studies, Woods Hole, MA.

**Braun CD\***, Thorrold SR. 2014. Population and migratory connectivity in ocean ecosystems. Invited oral presentation at Sea Education Association, Woods Hole, MA.

**Braun CD\***, Skomal GB, Thorrold SR, Berumen ML. 2013. Movement ecology of *Manta alfredii* in the eastern Red Sea. Invited oral presentation at WHOI Biology Department Seminar Series, Woods Hole, MA.

**Braun CD\***, Skomal GB, Berumen ML, Thorrold SR. 2011. Movements of juvenile whale sharks (*Rhincodon typus*) in the Red Sea. Invited oral presentation at The College of Idaho Environmental Studies Seminar Series, Caldwell, ID.

## CONFERENCE PRESENTATIONS

**Braun CD\***, Gaube P, Skomal GB, Thorrold SR. 2018. Mesoscale oceanography influences highly migratory shark movements. Ocean Sciences Meeting, Portland, OR (Domestic, Oral).

Thorrold SR\*, McMahon K, **Braun CD**, Houghton LA, Berumen ML, Planes S. Reconciling functional and genetic diversity in fish communities on coral reefs in the central tropical Pacific by combining compound specific stable isotope analysis, population genetics and acoustic telemetry. 2018. Ocean Sciences Meeting, Portland, OR (Domestic, Oral).

Gaube P\*, Thorrold SR, **Braun CD**, McGillicuddy Jr D, Lawson G. 2017. Mesoscale eddies influence white shark movements in the open ocean. ASLO Ocean Sciences, Honolulu, HI (International, Oral).

**Braun CD\***, Galuardi B, Thorrold SR. 2017. An improved hidden Markov method for geolocating archival-tagged fishes. Bio-Logging Symposium, Konstanz, Germany (International, Oral).

Gaube P\*, Thorrold SR, **Braun CD**, McGillicuddy Jr DK, Lawson G, Skomal GB. 2016. The Use of Mesoscale Eddies and Gulf Stream Meanders by White Sharks *Carcharodon carcharias*. Ocean Sciences Meeting, New Orleans, LA (International, Oral).

Thorrold SR\*, McMahon K, **Braun CD**, Berumen ML, Houghton LA. 2016. Tracing Carbon Flow Through Food Webs on Isolated Coral Reefs in the Central Pacific Ocean Using a Compound-Specific Stable Isotope Approach. Ocean Sciences Meeting, New Orleans, LA (International, Oral).

**Braun CD\***. 2016. Creeping climate constraint: A case study of the North Atlantic's pelagic predators. Graduate Climate Conference, Seattle, WA (National, Poster).

**Braun CD\***, Skomal GB, Thorrold SR, Berumen ML. 2016. Movements of the reef manta ray (*Manta alfredi*) in the Red Sea. International Coral Reef Symposium, Honolulu, HI (International, Poster).

**Braun CD\***, Skomal GB, Thorrold SR. 2014. Fidelity and migration of basking sharks in the Atlantic. Ocean Sciences Meeting, Honolulu, HI (International, Poster).

Afonso P\*, **Braun CD**, Vandeperre F, Fontes J, Skomal GB, Thorrold SR. 2014. Deep diving in large pelagic fishes. 65th Tuna Conference, UCLA (International, Oral).

**Braun CD\***, Skomal GB, Thorrold SR, Berumen ML. 2013. Movement ecology of *Manta alfredii* in the eastern Red Sea. Indo-Pacific Fish Conference, Okinawa, Japan (International, Oral).

Berumen ML, **Braun CD\***, Cochran JE, Skomal GB, Thorrold SR. 2013. Seascape-scale movements of whale sharks in the Saudi Arabian Red Sea. 3rd International Whale Shark Conference, Atlanta, GA (Int., Oral).

**Braun CD\***, Berumen ML, Skomal GB, Thorrold SR. 2011. Movements of juvenile whale sharks (*Rhincodon typus*) in the Red Sea. American Elasmobranch Society and Joint Meeting of Ichthyologists and Herpetologists, Minneapolis, MN (National, Oral).

**Braun CD\***, Finch SL\*. 2011. Butterflyfish (*Chaetodontidae*) distribution on the Heron Reef, Great Barrier Reef, Australia. International Marine Conservation Congress, Victoria, BC (International, Poster).

- Braun CD\***, Walser CA. 2011. The diet and distribution of largemouth bass (*Micropterus salmoides*) in the lower Boise River, Idaho. The College of Idaho Student Research Conference, Caldwell, ID (Institutional, Poster).
- Braun CD\***, Berumen ML, Skomal GB, Thorrold SR. 2011. Movements of juvenile whale sharks (*Rhincodon typus*) in the Red Sea. The College of Idaho Student Research Conference, Caldwell, ID (Institutional, Oral).
- Braun CD\***, Walser CA. 2011. The diet and distribution of largemouth bass (*Micropterus salmoides*) in the lower Boise River, Idaho. Idaho Chapter of American Fisheries Society, Boise, ID (State, Poster).
- Braun CD\***, Walser CA. 2011. The diet and distribution of largemouth bass (*Micropterus salmoides*) in the lower Boise River, Idaho. Idaho Statehouse, Boise, ID (State, Poster).
- Braun CD\***, Finch SL. 2010. Butterflyfish (*Chaetodontidae*) distribution on the Heron Reef, Great Barrier Reef, Australia. The College of Idaho Student Research Conference, Caldwell, ID (Institutional, Poster).
- Braun CD\***, Finch SL, Yensen E. 2010. Determining Southern Idaho Ground Squirrel (*Spermophilus brunneus endemicus*) Soil Preferences Using GIS Analysis. The College of Idaho Student Research Conference, Caldwell, ID (Institutional, Poster).
- Braun CD\***, Finch SL. 2010. Butterflyfish (*Chaetodontidae*) distribution on the Heron Reef, Great Barrier Reef, Australia. Idaho Academy of Sciences, Twin Falls, ID (State, Poster). **Best Poster in Ecology**
- Braun CD\***. 2009. Using GIS to model populations of redband trout, *Oncorhynchus mykiss gairdneri*, in the headwaters of the Owyhee River drainage. The College of Idaho Student Research Conference, Caldwell, ID (Institutional, Poster).

## TEACHING AND MENTORSHIP

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|-------------|---|
| Nov 2017    | <b>Invited lecturer.</b> Birches School, Lenox, MA (50 elementary and secondary school students)  |
| May 2017    | <b>Invited lecturer.</b> Mullen Hall Elementary School, Falmouth, MA (300 elementary school students)   |
| Nov 2016    | <b>Invited lecturer.</b> Ecology, Evolution and Diversity, The College of Idaho. Instructor: C. Walser (35 undergraduate students)  |
| Spring 2016 | <b>Teaching Assistant</b> , graduate-level Biological Oceanography, MIT-WHOI Joint Program in Oceanography. Instructors: L. Mullineaux, A. Tarrant. Conducted lectures and recitation sections, wrote and graded tests, problem sets and daily assignments, advised professors on student performance (5 graduate students) |
| Feb 2015    | <b>Invited lecturer.</b> Stonehill College, Easton, MA (50 undergraduates)  |
| Oct 2014    | <b>Invited lecturer.</b> Yale field course, Woods Hole, MA (15 advanced undergraduates)   |
| Summer 2014 | <b>Guest Lecturer</b> , On expedition in the Phoenix Islands Protected Area, Sea Education Association (25 advanced undergraduates)   |
| Summer 2012 | <b>High school mentor</b> for summer volunteer at WHOI.   |

- Fall 2010      **Teaching Assistant.** Stream Ecology (lecture and lab). Instructor: C. Walser; The College of Idaho (30 undergraduates)
- Spring 2010    **Course Development.** Designed and tested Advanced Geographic Information Systems syllabus.
- 2009 - 2011    **Student Mentor.** Heritage Scholar Program, The College of Idaho.

## TECHNICAL SKILLS AND TRAINING

**Programming languages:** R (expert), Matlab (intermediate)

**Analysis:** R (writing libraries, parallel computing, statistics, mapping, graphics), High-performance computing via Amazon Web Services, LaTeX/Markdown, Github, Adobe Creative Suite (Illustrator, Photoshop)

**Modeling:** Generalized linear and additive modeling, boosted regression trees, brownian bridges, step selection functions, and other species distribution modeling approaches

**GIS/Remote Sensing:** GMT, QGIS, many cartographic utilities implemented in R, ArcGIS

**AniMove:** Course on Animal Movement and Remote Sensing in Ecology and Conservation, 13-24 April 2015, Smithsonian Conservation Biology Institute, USA.

**OS:** Mac, Linux/Ubuntu, Windows

**Other:** AAUS Scientific Diver, PADI Rescue and Advanced Diver, NAUI Drysuit and Nitrox, Part 107 certified commercial drone pilot, Wilderness First Aid

## SELECTED MEDIA

- Oceanus magazine: Sharks Take 'Tunnels' into the Depths, July 2018. [link](#)
- National Geographic News: Why Great White Sharks Hang Out in Warm Whirlpools?, June 2018. [link](#)
- Boston Globe: Great white sharks like to hang out in ocean eddies, new study says, June 2018. [link](#)
- Cape Cod Chronicle: What do white sharks do in the middle of the atlantic?, October 2017. [link](#)
- National Geographic Facebook Live: Live at National Geographic Museum's SHARKS exhibit, July 2017.
- National Geographic Family Day: The secret lives of sharks, July 2017.
- Falmouth Enterprise: Falmouth shark expert gives talk at Boston Pops 'JAWS', June 2017. [link](#)
- Jacksonville Daily News: Great white shark tag recovered at Cape Lookout, April 2017. [link](#)
- Inside the Adventure podcast: Episode 20 - Camrin Braun, Oceanographer, October 2016. [link](#)
- Capecod.com: WHOI Teams up With Local Fishermen to Track Blue, Mako Sharks, August 2016. [link](#)
- Oceanus magazine: Shark Tales - Satellite tags reveal hidden world of ocean's largest fish, June 2016. [link](#)
- Cape Cod Times: Woods Hole researchers interested in shark of a different color, June 2016. [link](#)
- GearJunkie: 30 Young Adventure Leaders You Need to Know, May 2016. [link](#)
- Science Daily: Newly discovered juvenile whale shark aggregation in Red Sea, August 2014. [link](#)



- Phys.org: Tags reveal Chilean devil rays are among ocean's deepest divers, July 2014. [link](#)
- National Geographic News: What Ate a 9-Foot Great White Shark? Another Great White?, June 2014. [link](#)
- Outreach video: The secret lives of sharks, 2014. [link](#)

## SYNERGISTIC AND SERVICE ACTIVITIES

<b>Service:</b>	<i>Reviewer:</i> Animal Biotelemetry, Deep Sea Research Part II, Ecological Modelling, Journal of Fish Biology, Marine and Freshwater Research, Marine Ecology Progress Series, Methods in Ecology and Evolution, PeerJ, PLoS One, Science Advances
<b>Membership:</b>	American Elasmobranch Society, International Bio-logging Society, International Society for Reef Studies, Sigma Xi, The Oceanography Society, Society for Conservation Biology
<b>Non-academic:</b>	<i>Explorer</i> , National Geographic; <i>Elected member</i> , The Explorer's Club; <i>Elected representative</i> , MIT-WHOI Joint Program Student Group; <i>Hall Director</i> , The College of Idaho; <i>Director</i> , Outdoor Education Program at The College of Idaho; <i>Resident Assistant</i> , The College of Idaho; <i>Lead Student Ambassador</i> , The College of Idaho Admissions; <i>Member</i> , Varsity Ski and Snowboard Team at The College of Idaho; <i>Student Mentor</i> , The College of Idaho Residence Life

Updated 21 October 2018