



# JULIA R. G. DOMBROSKI

BSc, MSc, Ph.D. Candidate

Syracuse University  
Biology Department  
107 College Place  
Syracuse 13244 NY, USA

 jribeiro@syr.edu  
 +1(315) 876-8622  
 juliargdombroski.com  
 @dombroski\_julia

## EDUCATION

---

- 2017-**            **Ph.D in Biology**  
Syracuse University, Syracuse, NY, USA  
Dissertation title: *Noise exposure and behavioral effects of noise on Florida Manatees*
- 2013-2015**    **M.Sc. in Psychobiology & Animal Behavior**  
UFRN, Rio Grande do Norte, Brazil  
Dissertation title: *Acoustic ecology of southern right whales off Brazil*
- 2017-2011\***   **B.Sc. in Biology**  
UPM, Sao Paulo, Brazil  
Dissertation title: *Effects of smoke on the germination of forb seeds from Brazilian savannas*  
\*with semester-long exchange experience at Porto University, Portugal.

## PEER-REVIEWED PUBLICATIONS

---

*7 published articles / 4 manuscripts in preparation*

- 2022**            Zeh, J.M., **Dombroski, J.R.G.**, Parks, S. E. (2022) Preferred shallow-water nursery sites provide acoustic crypsis to southern right whale mother-calf pairs. Target journal: Proceedings of the Royal Society Biological Sciences. *R. Soc. open sci.* **9**:220241220241. DOI: [10.1098/rsos.220241](https://doi.org/10.1098/rsos.220241)
- 2021**            **Dombroski, J. R. G.**; Parks, S. E.; Nowacek, D. (2021) Dive behavior of North Atlantic right whales: implications for conservation. *Endangered Species Research*, 46:35-48. DOI: [10.3354/esr01141](https://doi.org/10.3354/esr01141)

- 2020**      **Dombroski, J.R.G.**, Parks, S. E., AC Flores, P., Martín López, L. M., Shorter, K. A., & Groch, K. R. (2020) Animal-borne tags provide insights into the acoustic communication of southern right whales (*Eubalaena australis*) on the calving grounds. The Journal of the Acoustical Society of America, 147(6), EL498-EL503. **DOI:** [10.1121/10.0001391](https://doi.org/10.1121/10.0001391)
- 2019**      Parks, S. E., **Dombroski, J. R.G.**, Shorter, K. A., Wiley, D. N., Ross, M., & Johnson, M. (2019) Extended duration acoustic tags provide insight into variation in behavioral response to noise by marine mammals. In Proceedings of Meetings on Acoustics 5ENAF (Vol. 37, No. 1, p. 010013). Acoustical Society of America. **DOI:** [10.1121/2.0001239](https://doi.org/10.1121/2.0001239)
- 2017**      **Dombroski, J. R. G.**; Parks, S; Groch, K; Flores, P; Sousa-Lima, R. (2017) Calling behavior of Southern right whale (*Eubalaena australis*) mother-calf pairs off Brazil is independent of diel periods. Marine Mammal Science. **DOI:** [10.1111/mms.12382](https://doi.org/10.1111/mms.12382)
- 2016**      **Dombroski, J. R. G.**; Parks, S; Groch, K; Flores, P; Sousa-Lima. (2016) Vocalizations produced by southern right whale (*Eubalaena australis*) mother-calf pairs in a calving ground off Brazil. The Journal of the Acoustical Society of America, 140, 1850-1857. **DOI:** [10.1121/1.4962231](https://doi.org/10.1121/1.4962231)
- 2016**      Fichino, B. S., **Dombroski, J. R. G.**, Pivello, V. R. and Fidelis, A. (2016) Does Fire Trigger Seed Germination in the Neotropical Savannas? Experimental Tests with Six Cerrado Species. Biotropica, 48: 181–187. **DOI:** [10.1111/btp.12276](https://doi.org/10.1111/btp.12276)

#### MANUSCRIPTS IN PREPARATION

- In prep**      **Dombroski, J. R.G.**, Ross, M., Johnson, M. & Parks, S. E. Manatees are exposed airplane noise on Florida’s Atlantic Coast. Target journal: Royal Society Open.
- In prep**      **Dombroski, J. R.G.**, K., Ross, M., Johnson, M. & Parks, S. E. Classifying manatee behavior using high frequency accelerometer. Target journal: Methods in Ecology and Evolution.
- In prep**      **Dombroski, J. R. G.**, Parks, E. S. Sirovic, A. Can we rely on auxiliary data from multisensory tags to detect focal acoustic events? Target journal: Journal of the Acoustic Society of America

**In prep** Parks, S. E., **Dombroski, J. R.G.**, Langekilde, T. Developmental acceleration and phenotypic plasticity in response to road noise exposure in the cricket *Gryllus bimaculatus*. Target journal: Proceedings of the Royal Society Biological Sciences.

## FUNDING

---

### RESEARCH GRANTS

*Total dollar amount > US\$ 400,000.00*

- 2020-2023** **Living Marine Resources (LMR – NAVFAC) - US\$ 357,196**  
 Demonstration and validation of passive acoustic density estimation for right whales. Parks, S; Thomas, L.; **Dombroski, J.R.G**
- 2018-2020** **Christine Stevens Wildlife Awards (AWI) - US\$ 12,000**  
 Using non-invasive digital acoustic tags to quantify close encounters with vessels and the behavioral effects on Florida manatees. Parks, S.; **Dombroski,**
- 2018-2019** **Marine Mammal Commission Populations at Risk (MMC) - US\$ 19,580**  
 Southern right whales as a proxy for investigating North Atlantic Right whales. Parks, S; **Dombroski, J.R.G**
- 2018** **Cetacean Society International Research in Developing Countries (CSI) - US\$ 2,000**  
 Vocal behavior of southern right whale mother-calf pairs. **Dombroski, J..**
- 2018** **VIVA Research Grant – Whales, dolphins and cia. - US\$ 2,000**  
 Using bioacoustics to investigate the behavioral ecology of right whales off Brazil. **Dombroski, J. R. G.**
- 2013** **Rufford Foundation Conservation Driven Research - US\$ 7,500**  
 Acoustic Ecology of southern right whales off Brazil. **Dombroski, J. R. G.**
- 2013** **Cetacean Society International Research in Developing Countries (CSI)**  
 Southern right whale calls and related behavior. **Dombroski, J. R. G.**

## RESEARCH APPOINTMENTS

---

SYRACUSE UNIVERSITY

- 2022**            **Syracuse University Doctoral Fellowship**  
Research Fellow
- 2021-2022**    **Accurate – methods for cue rate estimation in baleen whales**  
Research Assistant
- 2021-2022**    **Validation of passive acoustic density estimation for right whales**  
Research Assistant
- 2018-2019**    **Acoustic ecology of right whales on calving grounds**  
Research Assistant
- 2019**            **Effects of road noise in the cricket *Gryllus bimaculatus***  
Research Assistant

#### FEDERAL UNIVERSITY OF RIO GRANDE DO NORTE

- 2013-2015**    **Council for Scientific and Technological Development Fellowship**  
Research Fellow

#### INVITED TALKS

---

- 2021**            **Dombroski, J.R.G.**, Parks, S. E., AC Flores, P., & Groch, K. R (2021)  
Advances in bioacoustics for southern right whale conservation. Pre-  
International Whaling Commission Scientific Workshop – Southern Right  
Whales (Virtual)
- 2021**            **Dombroski, J.R.G.**, (2021) Using Biologging tools to investigate animal  
behavior. UFRJ seminars in Ecology and Evolution
- 2020**            **Dombroski, J.R.G.**, (2020) Where bioacoustics can take you. Women in  
Ecology Webinar. Saint Mary`s College
- 2018**            **Dombroski, J.R.G.**, (2018) Past and future of acoustic communication  
research in the Right Whale Environmental Protected Area. APA Baleia  
Franca Garopaba, SC, Brazil
- 2015**            **Dombroski, J.R.G.**, (2015) Listening for Brazilian Right whales Global

comparison of right whale vocalizations Workshop, 21<sup>st</sup> Conference on the Biology of Marine Mammals. San Francisco, CA, United States.

- 2015**      **Dombroski, J.R.G.**, Cultural transmission and bioacoustics (2015) Cultural Evolution Symposium. UNESP Rio Preto, São Paulo, Brazil.

## CONFERENCE PRESENTATIONS

---

*9 oral presentations / 12 poster presentations / 21 total presentations*

### ORAL PRESENTATIONS

- 2022**      **Dombroski, J. R. G.**, Gillespie, D., Parks, S. E., Carbaugh-Rutland, A. W., Širović, A. (2022) Can we rely on accelerometer data to assign calls to tagged baleen whales? 9<sup>th</sup> DCLDE, Oahu, HI, United States.
- 2022**      Parks, S. E., Shorter, K. A, **Dombroski, J. R. G.**, Wiley, D. N., Johnson, M. (2022) High resolution acoustic recordings tags with integrated GPS provide insight into diel variations in behavior and movement patterns. Effects of Sound in the Ocean on Marine Mammals, Beaufort, North Carolina, United States
- 2021**      **Dombroski, J. R.G.**, Ross, M., Johnson, M. & Parks, S. E. Florida manatees are exposed to airborne anthropogenic noise (2021) 7<sup>th</sup> Bio-logging Symposium (Virtual)
- 2021**      Zeh, J.; **Dombroski, J. R. G.**; Parks, S. (2021) Acoustic crypsis via habitat selection in Southern right whales. Animal Behavior Society Meeting, (Virtual)
- 2020**      **Dombroski, J. R. G.**; Parks, S.; Ross, M.; Johnson, M. (2020) Using long-term acoustic and GPS tags to quantify manatee exposure to behavioral disturbance. Animal Behavior Society Meeting (Virtual)
- 2015**      **Dombroski, J.**; Parks, S; Groch, K; Flores, P; Sousa-Lima, R. (2015). Using two passive acoustic monitoring methods to investigate the acoustic ecology of Southern right whales (*Eubalaena australis*) off Brazil. Listening to Aquatic Mammals in Latin America Workshop, Natal, Rio Grande do Norte, Brazil
- 2015**      **Dombroski, J.**; Parks, S; Groch, K; Flores, P; Sousa-Lima, R. (2015). An evaluation of automated and manual methods for detecting Southern Right whales (*Eubalaena australis*) contact calls. 7<sup>th</sup> DCLDE [Detection, Classification, Localization and Density Estimation] Workshop, La Jolla, CA,

## United States

- 2014** **Dombroski, J.**; Sousa-Lima, R.; Flores, P.; Groch, K.; Parks, S. (2014). Acoustic partitioning in a marine vertebrate community off Brazil. *Ecoacoustics: Emergent Properties from community to landscape*. Paris, France
- 2014** **Dombroski, J.**; Parks, S. E.; Groch, K.; Flores, P. A. C.; Urazghildiiev, I.; Sousa-Lima, R. (2014). Diel trends of Southern Right whale (*Eubalaena australis*) calling behavior off Santa Catarina, Brazil. 16<sup>a</sup> Reunión de expertos en mamíferos acuáticos de América del sur (RT) / X Congreso de la sociedad latinoamericana de especialistas en mamíferos acuáticos (SOLAMAC), Cartagena, Colombia

## POSTER PRESENTATIONS

‡ denotes Awarded Endangered Species Print Project Award for best student presentation

- 2019** **Dombroski, J. R. G.**; Parks, S.; Ross, M.; Johnson, M. (2019) Quantifying individual manatee exposure to vessel disturbance using GPS and acoustic tags. World Marine Mammal Conference, Barcelona, Spain
- 2019** Parks, S.; **Dombroski, J. R. G.**; Johnson, M. Shorter, K. A.; Thompson, M. A.; Wiley, D. N. (2019) What whales say at night: diel trends in the acoustic behavior of humpback whales on the North Atlantic feeding grounds. World Marine Mammal Conference, Barcelona, Spain
- 2019** Zeh, J.; **Dombroski, J. R. G.**; Flores, P. A. C.; Groch, K. R.; de Medeiros, C. R. M.; Parks, S. (2019) Understanding vocal behavior of right whale mother/calf pairs to inform passive acoustic density estimation. World Marine Mammal Conference, Barcelona, Spain
- 2019** Parks, S.; **Dombroski, J. R. G.**; Shorter, K. A.; Wiley, D. N.; Ross, M.; Johnson, M. (2019) Temporal and spatial variation in noise exposure and behavioral responses in marine mammals. The effects of noise on aquatic life, Den Haag, Netherlands
- 2018** **Dombroski, J.**, Parks, S.E., Nowacek. D.P. (2018) Dive behavior of North Atlantic right whales on southeastern U. S. calving ground. North Atlantic Right Whale Consortium Meeting, New Bedford, MA, USA<sup>‡</sup>
- 2017** **Dombroski, J.**, Parks, S.E., Nowacek. D.P. (2017). Out of sight: How much time do North Atlantic right whales spend within the detection range of visual surveys? 22<sup>nd</sup> Biennial Conference on the Biology of Marine Mammals.

Halifax, Nova Scotia, Canada

- 2017** Santos, M. C. O.; **Dombroski, J.**; Barcellos, D. D.; Klopper, L. (2017) Buzzy hunt: non-tonal acoustic emissions of beach-hunting Guiana dolphins. 22<sup>nd</sup> Biennial Conference on the Biology of Marine Mammals. Halifax, Nova Scotia, Canada
- 2017** **Dombroski, J.**, Parks, S.E., Groch, K. R., Flores, P. A., Sousa-Lima, R. S. (2017). Listening for right whales off Brazil: Present knowledge and future research. 173<sup>rd</sup> Meeting of the Acoustical Society of America and 3<sup>rd</sup> Joint Meeting of the Acoustical Society of America and the European Acoustics Association, Boston, MA, United States
- 2015** **Dombroski, J. R. G.**; Flores, P.; Groch, K; Parks, S; Sousa-Lima, R. (2015). Vocalizations and related behavior of Southern Right whale (*Eubalaena australis*) mother-calf pairs. 21<sup>st</sup> Biennial Conference on the Biology of Marine Mammals, San Francisco, CA, United States
- 2012** Almeida, I. G.; **Dombroski, J.** Impacts of dams on riverine dolphin populations (2012). 15<sup>a</sup> Reunión de expertos en mamíferos acuáticos de América del sur (RT) / IX Congreso de la sociedad latinoamericana de especialistas en mamíferos acuáticos (SOLAMAC). Puerto Madryn, Argentina
- 2012** Rollo, M. M. Jr.; **Dombroski, J. R. G.**; Almeida, I. G.; Souza, R. A. (2012) Sounds produced by the Amazon River dolphin (*Inia geoffrensis*) in Alto Madeira River, RO. 15<sup>a</sup> Reunión de expertos en mamíferos acuáticos de América del sur (RT) / IX Congreso de la sociedad latinoamericana de especialistas en mamíferos acuáticos (SOLAMAC). Puerto Madryn, Argentina
- 2011** **Dombroski, J.**; Fichino, B. S.; Fidelis, T. A.; Pivello, V. R.; Perine, M. (2011). Influence of temperature and smoke on the germination of forbs of the Brazilian Cerrado. 54<sup>th</sup> Symposium of the International Association for Vegetation Science, Lyon, France

## **TEACHING AND MENTORING EXPERIENCE**

---

### **COURSES TAUGHT**

*Teaching Assistant, Biology Department, Syracuse University, USA.*

- 2017-2019** **Ocean Life**  
Fundamentals of marine biology and oceanography for major and non-major audience.

**2020-2021 Introduction to Biology I & II**

Laboratory based courses focused on major biology concepts from molecular biology to global ecology

**2021 Ecology and Evolution**

Focused on modern topics in ecology and evolutionary biology. Evolution, phylogenetics, animal behavior, population ecology, community ecology and ecosystems.

*Masters research fellow, Psychobiology Department, UFRN, Brazil*

**2014 Animal Behavior**

Undergraduate course focused on animal behavior concepts and practical research concepts.

**2014 Introduction to Bioacoustics**

Undergraduate course focused on the principles of bioacoustics and practical research concepts.

## COURSE DEVELOPMENT

*Teaching Assistant, Biology Department, Syracuse University, USA*

**2021-2021 Introduction to Biology I & II (Online)**

Co-developed a transition plan and online version of laboratory-based courses to be taught during the COVID-19 lockdown.

*Visiting graduate researcher, Oceanography Department, USP, Brazil.*

**2015 Introduction to Marine Bioacoustics**

Developed a short course to introduce basic bioacoustics concepts to graduate students from the Oceanography department.

*Masters research fellow, Psychobiology Department, UFRN, Brazil*

**2014 Introduction to Animal Communication**

Developed a short course to introduce basic concepts of animal communication for students from the Ecology Department



**2014 Cultural Transmission in cetaceans and primates**

Co-developed a short course to cover cultural transmission modalities in a comparative framework.

**RESEARCH MENTORSHIP**

	<b>Degree</b>	<b>Name</b>	<b>Institution</b>
<b>2020-2022</b>	Masters	Taina Dias	UNIFAL-MG, Brazil
<b>2020-2022</b>	Masters	Isadora Carletti	UFSC, Brazil.
<b>2018-2020</b>	Masters	Amanda Martinelli	USP, Brazil
<b>2018-2019</b>	Undergraduate	Elaine Alberts	Syracuse University, USA
<b>2018-2019</b>	Undergraduate	Nicole Jaskot	Syracuse University, USA
<b>2018-2019</b>	Undergraduate	Luke Erickson	Syracuse University, USA
<b>2018</b>	Undergraduate	George El-Ahmir	Syracuse University, USA
<b>2015</b>	Undergraduate	Ana de Muzio	UNESP, Brazil

**SPECIAL TRAINING**

---

<b>2020</b>	<b>CATS Tags data analysis and data visualization</b> <i>Stanford University</i>
<b>2019</b>	<b>ANIMOVE – Animal Movement and Remote Sensing in Ecology and Conservation</b> <i>Max Planck Institute</i>
<b>2017</b>	<b>High resolution tag data processing and visualization</b> <i>University of St. Andrews</i>
<b>2016</b>	<b>R Language for ecological modeling</b> <i>University of São Paulo (USP)</i>

- 2015**      **ArcGIS analysis in oceanography**  
*University of São Paulo (USP)*
- 2014**      **SeaBASS Marine Bioacoustics Summer School**  
*Pennsylvania State University*

## RESEARCH EXPEDITIONS

---

- 2020-2022**      **Demonstration and validation of PAM density estimation for right whales**  
*Santa Catarina, Brazil*
- 2022**      **Feeding ecology of Bryde's whales**  
*Rio de Janeiro, Brazil*
- 2018-2019**      **Southern right whales as a proxy for investigating North Atlantic Right whale**  
*Santa Catarina, Brazil*
- 2017-2019**      **Behavioral ecology of humpback whales on SBMNS**  
*Stellwagen Bank Marine National Sanctuary, USA*
- 2016-2017**      **Acoustic Ecology of North Atlantic right whales on calving grounds**  
*Florida, Georgia, USA*
- 2015-2016**      **Cetaceans off the state of São Paulo**  
*São Paulo, Brazil*
- 2015**      **Cetacean monitoring off Santos Basin**  
*São Paulo, Brazil*
- 2015**      **The occurrence of cetacean species around the Açú Harbor**  
*Rio de Janeiro, Brazil*
- 2015**      **Dolphins from Rio Grande do Norte**  
*Rio Grande do Norte, Brazil*
- 2013-2014**      **Acoustic ecology of right whales off Brazil**

*Santa Catarina, Brazil*

- 2013**      **Effect of oceanographic parameters on humpback whale migration**  
*Abrolhos Bank, Brazil*
- 2012**      **Ecologic and acoustic features of the Amazon River dolphin**  
*Rondonia, Brazil*
- 2012**      **Viability of the Guiana dolphin (*Sotalia guianensis*) population in Cananéia**  
*São Paulo, Brazil*
- 2012**      **Modeling the distribution of cetacean species off Cabo Frio, Rio de Janeiro**  
*Rio de Janeiro, Brazil*

## SERVICE

---

### JOURNAL REVIEWER

Behavior | Marine Mammal Science | Behavioral Ecology | JASA-EL | Frontiers of Marine Science

### ABSTRACT REVIEWER

- 2021**      7<sup>th</sup> International Biologging Society Symposium
- 2019**      Word Marine Mammal Conference [WMMC]

### OUTREACH

- 2021**      **Dombroski, J. R. G.** (2021) Tales of Floppy tails: right whale mother-calf pairs, calving and nursing. Whale Watcher, American Cetacean Society. (Published article)
- 2021**      **Dombroski, J. R. G.** (2021) Using non-invasive acoustic tags to track Florida Manatees. Animal Welfare Institute Quarterly magazine – Winter 2021. (Published article)
- 2020**      **Dombroski, J. R. G.** (2020) Acoustic communication of right whales.

Instagram Live – Instituto Australis. (Talk)

## EVENT ORGANIZATION

- 2020-2021**      **SU Diversity in EEB Seminar Series**  
Online event
- 2017**            **22<sup>nd</sup> Society for Marine Mammalogy Biennial Conference**  
Halifax, Canada
- 2017**            **173<sup>rd</sup> Acoustical Society of America Meeting**  
Boston, USA
- 2016**            **2<sup>nd</sup> LAMLA Meeting – Listening to Aquatic Mammals in Latin America Workshop**  
Valparaiso, Chile
- 2016**            **1<sup>st</sup> LAMLA Meeting – Listening to Aquatic Mammals in Latin America Workshop**  
Natal, Brazil
- 2015**            **21<sup>st</sup> Society for Marine Mammalogy Biennial Conference**  
San Francisco, USA

## MEDIA ATTENTION

---

- 2022**            Whale mothers choose nursery sites in shallow waters where predators cannot 'eavesdrop' on communication with young  
<https://phys.org>
- 2022**            Hidden in plain sight: Biologists say southern right whale habitat choice is key to keeping young calves safe  
<https://www.sciencedaily.com/>

Additionally, my research has been featured in a myriad of news publications including local and national media in Brazil both in written and video form (*e.g.*, Jornal Hoje, Jornal da Tarde, Tribuna de Imbituba). I was interviewed for Profissão Repórter – documentary series at national TV in Brazil - to speak about acoustic communication research and science development in Brazil.

## SCIENTIFIC SOCIETY MEMBERSHIP

---

**Biologging Society**, **ABS** (Animal Behavior Society) | **SMM** (Society for Marine Mammalogy)\* | **SOLAMAC** (Sociedad Latino Americana de Especialistas en Mamíferos Acuáticos) | **WiSE** (Women in Science and Engineering – Syracuse University)

\*Student member elected for the conservation committee

## NON-ACADEMIC APPOINTMENTS

---

	<b>Type</b>	<b>Company</b>
<b>2016</b>	Environmental consulting	Socioambiental Consultores
<b>2015-2016</b>	Tutoring – Teaching	Basile Tutoring
<b>2015</b>	Environmental consulting	Fundação BioRio
<b>2012-2015</b>	Teaching material design	FTD Publishing
<b>2012</b>	Teaching material design	Saraiva Publishing
<b>2011-2012</b>	Environmental consulting	Arcadis Logos
<b>2011</b>	Teaching material design	Moderna Publishing
<b>2011</b>	Tutoring – Teaching	Tutores