

RENATO F. BORRAS-CHAVEZ

MARINE MAMMAL ECOPHYSIOLOGIST

renato.borraschavez@uri.edu | 1-254-419-1501

ORCID ID: 0000-0002-6415-2121

CURRENT POSITION

2025 **Postdoctoral Research Fellow**, College of The Environment and Life Sciences, University of Rhode Island, USA

EDUCATION

2020 **Ph.D. (Ecology & Evolution)**, P. Catholic University of Chile, Chile
Living in the fast lane: Foraging ecology of the Antarctic fur seal at the edge of their breeding distribution

2010 **M.S. (Ecology)**, San Diego State University, USA
Ecological and chemical responses of kelp under primitive harvesting methods: the pursuit of a sustainable method of harvesting in northern Chile

2007 **B.S. (Marine Biology)**, Andrés Bello University, Chile

PUBLICATIONS

Published

2024 **Borras-Chavez R**, Soteres, R.L., Gómez, G., Martínez, F., Fernández-Ferrada, N., Castillo Aguilar, M., Moreno Azua, F., Dognac, C., Arredondo, C., Brown, N., Sperou, E.S., Bonin, C.A., Goebel, M.E., Guerrero, A., Donke, M. & Kienle, S.S. Occurrence, residency, and habitat characterization of leopard seals in Chile. *Frontiers in Ecology and Evolution*. 12, 1448098. <https://doi.org/10.3389/fevo.2024.1448098>

Woodman, S. M., **Borras-Chavez, R.**, Goebel, M. E., Torres, D., Aguayo, A., & Krause, D. J. (2024). CS-PHOC: weekly census counts of Southern Ocean phocids at Cape Shirreff, Livingston Island. *Scientific Data*, 11(1), 895. <https://doi.org/10.1038/s41597-024-03744-9>

Ouled-Cheikh, J., March, D., **Borras-Chavez, R.**, Drago, M., Goebel, M. E., Fariña, J. M., ... & Cardona, L. (2024). Future climate-induced distribution shifts in a sexually dimorphic key predator of the Southern Ocean. *Global Change Biology*, 30(3), e17191.

<https://doi.org/10.1111/gcb.17191>

Queirós, J. P., **Borras-Chavez, R.**, Friscourt, N., Groß, J., Lewis, C. B., Mergard, G., O'Brien K. (2024). Southern Ocean food-webs and climate change: A short review and future directions. *PLOS Clim* 3(3): e0000358.

<https://doi.org/10.1371/journal.pclm.0000358>

Kienle, S.S., Bonin, C.A., Gómez, G., Goebel M.E., Donke, M., Sperou E.S., Guerrero-Vega A., & **Borras-Chavez R.** First paired observations of sexual behavior and calls in wild leopard seals. *Polar Biology*.

<https://doi.org/10.1007/s00300-024-03275-4>

2023

Sperou, E. S., Crocker, D. E., **Borras-Chavez, R.**, Costa, D. P., Goebel, M. E., Kanatous, S. B., ... & Kienle, S. S. Large and In Charge: Cortisol levels vary with sex, diet, and body mass in an Antarctic predator, the leopard seal. *Frontiers in Marine Science*, 10, 1097.

<https://doi.org/10.3389/fmars.2023.1179236>

Charapata, P., Clark, C. T., Miller, N., Kienle, S. S., Costa, D. P., Goebel, M. E., ..., **Borras-Chavez, R.** & Trumble, S. J. (2023). Whiskers provide time-series of toxic and essential trace elements, Se: Hg molar ratios, and stable isotope values of an apex Antarctic predator, the leopard seal. *Science of The Total Environment*, 158651.

<https://doi.org/10.1016/j.scitotenv.2022.158651>

Borras-Chavez, R., Goebel, M. E., Villegas-Amtmann, S., Hückstädt, L. A., Rivera-Rebella, C., Costa, D. P., ... & Bozinovic, F. (2023). Time and behavioral adjustments to lactation: Insights from a marine predator.

Marine Mammal Science. <https://doi.org/10.1111/mms.12970>

2022

Kienle, S. S., Goebel, M. E., LaBrecque, E., **Borras-Chavez, R.**, Trumble, S. J., Kanatous, S. B., ... & Costa, D. P. (2022). Plasticity in the morphometrics and movements of an Antarctic apex predator, the leopard seal. *Frontiers in Marine Science*, 1540.

<https://doi.org/10.3389/fmars.2022.976019>

- 2020 Klemmedson, A.D., Reiss, C., Kaufmann, R.S., Goebel, M.E., Dorval, E., Linkowski, T.B., & **Borras-Chavez, R.** "Variability in age of a Southern Ocean myctophid (*Gymnoscopelus nicholsi*) derived from scat-recovered otoliths". *Marine Ecology Progress Series* 633, 55-69. <https://doi.org/10.3354/meps13176>
- 2019 Olivares, F., Tapia, R., Gálvez, C., Meza, F., Barriga, G.P., **Borras-Chavez, R.**, Mena-Vasquez, J., Medina, R.A., & Neira, V. "Novel penguin *Avian avulaviruses* 17, 18 and 19 are widely distributed in the Antarctic Peninsula". *Transboundary and Emerging Diseases* 66, 2227-2232. <https://doi.org/10.1111/tbed.13309>
- 2016 **Borras-Chavez, R.**, Edwards, M., Rodriguez-Montesinos, E., Arvizu-Higuera, D., Briceño, D., & Hernandez-Carmona, G. "Repetitive harvesting of *Macrocystis pyrifera* and its effects on chemical constituents of economic value". *Botanica Marina* 59, 63-71. <https://doi.org/10.1515/bot-2015-0028>
- 2014 Gonzalez A.V., **Borras-Chavez R.**, Beltran J., Flores V., Vásquez J.A., & Santelices, B. "Morphological, ultrastructural and genetic characterization of coalescence in the intertidal and shallow subtidal kelp *Lessonia spicata* and *L. berteriana* (Laminariales, Heterokontophyta)". *Journal of Applied Phycology* 26, 1107-1113. <https://doi.org/10.1007/s10811-013-0112-6>
- 2012 **Borras-Chavez, R.**, Edwards, M. & Vasquez, J. "Testing Sustainable Management in Northern Chile: Harvesting *Macrocystis pyrifera* (Phaeophyceae, Laminariales), A Case Study". *Journal of Applied Phycology* 24, 1655-1665. <https://doi.org/10.1007/s10811-012-9829-x>

Submitted & To Be Submitted

- Accepted Sperou, E., Krause, D., **Borras-Chavez, R.**, Charapata, P., Costa, D., Crocker, D., ... & Kienle, S. (2024). Individual Specialization in a Generalist Apex Predator: The Leopard Seal. *Journal of Ecology and Evolution*. Preprint: [10.22541/au.173437934.46390016/v1](https://doi.org/10.22541/au.173437934.46390016/v1)
- Accepted **Borras-Chavez R.**, Toro-Valdivieso C & Sepúlveda M. Juan Fernandez Fur Seal *Arctocephalus philippii* (Peters, 1866). Book chapter in: "Mammals of Middle and South America: Carnivora". *Springer Nature Publisher*.

- In review **Borras-Chavez R**, Santa Cruz F, Kruger L & Cárdenas CA. "Pinnipeds foraging spatial behavior and their geographical overlap with fisheries in the Western Antarctic Peninsula" Book chapter in: Pinnipeds in Temperate and Polar Regions: regional impacts of global threats. *CRR Press*.
- In prep **Borras-Chavez R.**, Castillo-González V., Vergara V., Rivera-Rebella C., Goebel E.M., Lastra J., Chavez-Oyanadel R., González M., Castillo-Aguilar M., Osman L., Hiriart-Bertrand L. & Fariña J.M. Current population status and temporal dynamic of the Juan Fernandez Fur seal (*Arctocephalus Philippii*). *Ecology Letters*
- In prep **Borras-Chavez R.**, Vergara V., Castillo-González V., Rivera-Rebella C., Goebel E.M., González M., Hiriart-Bertrand L., & Lichtenstain G. Sharing is caring; assessment of the perceptions and interactions between the Juan Fernandez archipelago human community and the growing Juan Fernandez Fur seal population. *People & Nature*.
- In prep **Borras-Chavez R**, Goebel, M E, Villegas-Amtmann S, Hückstädt, L A, Costa D P, Budge, S M, Guerrero, A, van Calcar CJ, Dijkstra F, Fariña JM, & Bozinovic F. Linking dive behavior with prey-specific diet using machine learning tools in a free-range ocean predator Algorithm training, testing and implementation. *PLoS ONE*.

CONFERENCE PROCEEDINGS

- Accepted Yero Salazar J, Rivas P, **Borras-Chavez R**. Image-Based Leopard Seal Recognition: Approaches and Challenges in Current Automated Systems LatinX in CV (LXCV) Research at CVPR 2024
- 2023 Chen R, Ghobakhlou A, Narayanan, A, Pérez M, Oyanadel R O C, & **Borras-Chavez R**. Semi-Supervised Deep Learning for Estimating Fur Seal Numbers. In 2023 38th International Conference on Image and Vision Computing New Zealand (pp. 1-5). IEEE.
[10.1109/IVCNZ61134.2023.10343918](https://doi.org/10.1109/IVCNZ61134.2023.10343918)

- 2017 **Borras-Chavez R**, Goebel ME, Villegas-Amtmann, S, Costa D P, Fariña J M & Bozinovic F. Moms on the edge. Exploring foraging behavior and the cost of lactation under extreme environments. The case of the Antarctic fur seal (*Arctocephalus gazella*). In “Visiones sobre Ciencias Antártica”. Proceeding of IX Congreso Latinoamericano de Ciencia Antártica, pp 94-97.

TECHNICAL & GOVERNMENT REPORTS

- 2024 Pardo, E., D. Krause, **Borras-Chavez R.**, & H. McGovern (2024). CCAMLR protocols for pinniped identification, sexing, and length Measurement. WG-IMAF-2023/08 CCAMLR.
- 2022 **Borras-Chavez R.**, Castillo-González V., Vergara V., Rivera-Rebella C. Goebel E.M., Lastra J., González M, Castillo-Aguilar M., & Hiriart-Bertrand L. (2022). Informe Final FIPA N° 2021-19. Censo del lobo fino de Juan Fernández *Arctocephalus philippii* en el archipiélago de Juan Fernández. ONG Costa Humboldt y Centro de Ecología Aplicada y Sustentabilidad (CAPES). 246 páginas + Anexos.

AWARDS

- 2015 **Antarctica Service Medal**, National Science Foundation, USA
- 2013 **Best 1st Year PhD Student**, P. Catholic University of Chile, Chile
- 2007 **Best Undergraduate of the Generation**, Andrés Bello University, Chile
- 2007 **USAC English Language Award**, Andrés Bello University, Chile & University of Nevada, US

GRANTS & FELLOWSHIPS

Awarded

- \$897,000 National Sciences Foundation Office of Polar Programs, USA (2022-2025)
- \$115,000 National Fisheries and Aquaculture Grant, Chile (2021)
- \$50,000 National Association of Research & Development PhD Scholarship, Chile (2013-2017)
- \$48,360 NOAA Antarctic Marine Living Resources Support Grant for Doctoral Research in Antarctica, USA (2014-2017)
- \$48,000 Collaborator, Public Sciences Program Grant. Sciences Ministry of Chile. Outreach products for public sciences (2022)

\$30,000	National Commission of Scientific Investigation and Technology. Bicentennial Masters Scholarship, Chile (2009–2010)
\$23,000	Academic Vice-Chancellor Grant for Research Internship, Chile (2017)
\$15,000	Chilean Antarctic Institute (INACH) Antarctic Thesis Doctoral Support Grant, Chile (2015-2017)
\$2,500	NSF Travel Grant for SCAR Biology conference, New Zealand (2023)
\$2,500	NSF Travel Grant for SCAR Ocean Science conference, Chile (2024)
\$1,000	SRP State of the Antarctic Ecosystem Travel Grant SCAR Biology Symposium (2017)
\$1,000	Tinker Foundation Tinker-Muze Prize for Science & Policy in Antarctica (2019)
\$500	Society of Marine Mammalogy IRC Travel Grant (2021)
\$500	PSECCO Travel grant NSF (2024)
\$300	San Diego State University Farris/EPEF Travel Grant, USA (2010)

RELEVANT EMPLOYMENT

2023-2024	Postdoctoral Research Associate , Department of Biology, Baylor University, USA
2022-2023	Research Associate , Department of Ecology, P. Catholic University of Chile
2022	Principal investigator , Project leader, Costa Humboldt NGO. “ <i>Census of the Juan Fernandez Fur seal (Arctocephalus philippii) in the Juan Fernandez archipelago</i> ”
2022	Research Associate. Center of Applied Ecology and Sustainability (CAPES)
2020	Science Consultant , Wildlife Conservation Society, Chile <i>Conducted systematic reviews of southern scallop and king crab fisheries resources in Magallanes and analyzed conservation measures</i>
2019	Logistic Support & Dive Technician , Chilean Antarctic Institute Research Station, Antarctica. <i>Collected samples and provided boat support to all projects operating at the station</i>
2017-2019	Laboratory & Aquarium Coordinator , Chilean Antarctic Institute, Chile. <i>Coordinated aquarium and laboratory constructions for the future International Antarctic Center (CAI)</i>
2018	Scientific Coordinator , Chilean Antarctic Institute Research Station, Antarctica. <i>Coordinated and managed 60 research projects at the Antarctic station</i>
2011-2013	Research Associate , P. Catholic University of Chile, Chile

Led design and execution of experiments testing chimerism in kelp species

2009-2010 **Marine Collector**, San Diego State University, USA
Collected and maintained marine organisms for university classes

TEACHING EXPERIENCE

- Lecturer**
- Population Ecology** (Graduate level course), University of Magallanes, Chile (1 term, 2019)
 - General Biology Lab**, San Diego State University (2 terms, 2008)
- Guest Lecturer**
- Climate Change in Antarctica**, University of Chile (2015-22)
 - Technological Development in Biological Research**, University of Chile (2015-22)
 - Kelp Forest Ecology**, P. Catholic University of Chile (2011-12)
 - Marine Mammals**, P. Catholic University of Chile (2011-12)
 - Intro. to Ecology**, P. Catholic University of Chile (2011-12)
 - Intro. to Biological Sciences**, P. Catholic University of Chile (2011-12)
- Teaching Assistant**
- Marine Botany**, P. Catholic Univ. of Chile (2 terms, 2011-12)
 - Marine Botany**, San Diego State University (1 term 2009)
 - Applied Phycology**, Andrés Bello University (1 term, 2006)
 - Marine Botany**, Andrés Bello University (4 terms, 2003-05)

CONFERENCE PRESENTATIONS

- 2024 **Borras-Chavez R**, Soteres RL, Gómez G, Martínez F, Fernández-Ferrada N, Castillo Aguilar M, Moreno Azua F, Dougnac C, Arredondo C, Brown N, Sperou ES, Bonin CA, Goebel ME, Guerrero A, Donke M & Kienle SS. An Antarctic predator in South America. Occurrence, distribution, and habitat characterization of leopard seals in Chile. SCAR OSC 2024, Pucón, Chile. Poster Presentation (English)
- Borras-Chavez R**, Sperou ES, Lester K, Santa Cruz F, Cárdenas CA & Krüger L. A review on Pinnipeds' foraging ecology and their overlap with fisheries in the Western Antarctic Peninsula. SCAR OSC 2024, Pucón, Chile. Oral Presentation (English)

2023 **Borras-Chavez R**, Cheeseman T, Low P, van der Linde K, Gómez G, Krause D, Sperou E, Bonin E & Kienle S. *Global Distribution of an Antarctic apex predator: The leopard seal*. Polar Symposium 2023, The Hague, The Netherlands. Poster Presentation (English)

Borras-Chavez R, Goebel ME Guerrero A, Dijkstra FJ, van Calcar CJ, Villegas-Amtmann S, Hückstädt L, Costa DP, Budge SM, Fariña JM. *The what, where, and when of Antarctic fur seals' foraging behavior; linking dive behavior with prey species targeted using machine learning* SCAR Biology 2023, Christchurch, New Zealand. Oral Presentation (English)

Borras-Chavez R, Gómez G, Fernández-Ferrada N, Martínez F Dougnac C, Arredondo C & Kienle S. *Abundance, distribution, and habitat characterization of leopard seals in Chile*. SCAR Biology 2023, Christchurch, New Zealand. Poster Presentation

2022 **Borras-Chavez R**, Goebel, ME, Villegas-Amtmann S, Hückstädt, LA, Costa DP, Budge, SM, Guerrero, A, Dijkstra JF, van Calcar CJ, Fariña JM, & Bozinovic F. *Linking dive behavior with quantitative prey-specific fatty acids diet estimation using machine learning tools in a free-range ocean predator* 24th Biennial Conference on the Biology of Marine Mammals. Oral Presentation (English)

2020 **Borras-Chavez R**, Goebel M, Villegas-Amtmann S, Hückstädt LA, Costa DP, Fariña JM & Bozinovic F. *Foraging behavior of lactating Antarctic fur seal at the extreme edge of their breeding distribution*. SCAR 2020 Online Conference. Oral Presentation (English)

2020 **Borras-Chavez R**, Maturana M & Roldán G. *Articulating the early career polar scientists' network: a local implementation of a global strategy*. 1st Critical Latin-American interdisciplinary seminar, Chile. Oral Presentation and panel discussion (Spanish)

2019 **Borras-Chavez R**, Villa Arce M, Edwards MS, Rodríguez-Montesinos YE, Borras-Geisse M & Hernández-Carmona G. *Spatial variation of alginate properties and a nutritional quality comparison of six kelp species from the Aleutian Archipelago*. Western Society of Naturalists the 100th Annual meeting, México. Oral Presentation (English)

- 2019 **Borras-Chavez R**, Goebel M, Villegas-Amtmann S, Rivera C, Hückstädt LA, Costa DP, Fariña JM & Bozinovic F. *Life in the fast lane: foraging behavior of Antarctic fur seals (Arctocephalus gazella) at the edge of their southernmost breeding distribution*. World Marine Mammal Science Conference, Spain. Poster presentation (English)
- 2017 **Borras-Chavez R**, Goebel M, Villegas-Amtmann S, Costa DP, Fariña JM & Bozinovic F. *Life in the Fast Lane: differences in foraging behavior between Lactating and Non-Lactating Antarctic fur seals at a high latitude*. XII SCAR Biology Symposium, Belgium. Oral Presentation (English)
- 2017 **Borras-Chavez R**, Goebel M, Villegas-Amtmann S, Costa DP, Fariña JM & Bozinovic F. *Mothers at the edge Exploring behavioral changes while foraging associated to the cost of lactation in extreme environment The Antarctic Fur Seal (Arctocephalus gazella)*. IX Congreso Latinoamericano de Ciencias Antárticas, Chile. Oral Presentation (Spanish)
- 2014 **Borras-Chavez R** & Borras-Geisse M. *Bromatologic and energetic analysis of six brown algae from the Aleutian Islands, Alaska* XI Congreso Nacional de Micro y Macroalgas de Chile, Chile. Oral Presentation (Spanish)
- 2012 **Borras-Chavez R**, Flores V, González AV, Beltrán J and Santelices B. *Coalescence in Kelps Histological and morphological description in Lessonia spicata*. Western Society of Naturalists 2012, USA. Oral Presentation (English)
- 2012 **Borras-Chavez R**, Flores V, Beltrán J, González AV, Santelices B. *Coalescencia en algas pardas Descripción histológica y morfológica del fenómeno en Lessonia spicata*. XXIII Reunión anual de botánica de Chile XIX Reunión anual de la sociedad de ecología de Chile VI Reunión anual de la sociedad chilena de evolución, Chile. Oral Presentation (Spanish)
- 2011 **Borras-Chavez R** & Edwards M. *Variation in the Carbon/Nitrogen rate under repeated harvesting: An ecological perspective*. IX Congreso de Ficología de Latinoamérica y el Caribe, VII Reunión Iberoamericana de Ficología y IX Simposio Argentino de Ficología La Plata, Argentina. Oral Presentation (Spanish)
- 2010 **Borras R**, Edwards M & Vasquez J. *Ecological Responses of Macrocystis recruitment under primitive harvesting techniques: The Pursuit of a Sustainable*

Treatment for Kelp Harvesting in Chile. XX International Seaweed Symposium, México. Oral Presentation (English)

- 2010 **Borras R**, Edwards M, Arvizu-Higuera D, Rodriguez-Montesinos E, Briceño-Dominguez D & Carmona-Hernandez G. *Alginic and Bromatologic analysis of *Macrocystis pyrifera* under short and long-term harvesting.* Western Society of Naturalist, USA. Oral Presentation (English)
- 2009 **Borras R**, Edwards M & Vasquez J. *Cosecha de *Macrocystis integrifolia* (Bory 1826, Laminareaceae) en Chile Respuestas Ecológicas y Búsqueda de una Técnica de Extracción Sustentable XIII.* Latinamerican Conference of Ocean Sciences and the VIII Cuban Ocean Sciences Conference, Cuba. Oral Presentation (Spanish)
- 2006 **Borras R** & Mora A M. *Standardizing *Nannocloris oculata* for water quality Analysis.* XXVI Chilean Ocean Sciences Congress, Chile. Poster presentation (Spanish)

PUBLIC & DEPARTMENT SEMINARS

- 2023 *Distribution and connectivity of leopard seals in the Antarctic Peninsula* Chilean Antarctic Military Station “Bernardo O’Higgins”, Antarctica.
Leopard Seal Photo ID. And its potential for Antarctic conservation engagement in tourism. Antarctic 21 Tour operators. (online)
- 2021 *My Antarctic Path*, Chilean Antarctic Institute (Chile)
- 2020 *The Ocean, Antarctica, and a bunch of Serendipities*, Andrés Bello University (Chile)
- 2020 *Ice-Associated Megafauna of Chile: the leopard seal, A case of study*, Magallanes University (Chile)
- 2018 *From Biological Science to Engineer* Maria Behety School (Chile)
- 2018 *Tales of an Iceberg*, Public Library 47 (Chile)
- 2017 *You are what you eat...as long as you eat: the Antarctic fur seal*, Chilean Navy Vessel Aquiles (Chile)
- 2017 *The Underwater Challenge*, Tokio Sea-Life Park Aquarium (Japan)
- 2017 *Tales of an Iceberg*, Waldorf School of San Diego (USA)
- 2017 TED Talks ([TEDx Punta Arenas](#))
- 2010 *30 Years of "Top-Down" Regulation in the Aleutian Islands, Alaska*, CICIMAR (México)

COURSES & TRAINING

In progress	MATLAB Master Class: From Beginner to Expert (Udemy)
In progress	Machine Learning A-Z: Hands on Python & R in Data Science (Udemy)
2021	Data Visualization with R and ggplot2 (Udemy)
2021	Spatial Analysis using R
2021	Using R Markdown
2020	R Programming A-Z: R for Data Science (Udemy)
2020	R Programming Advanced Analytics in R for Data Science (Udemy)
2015	Applications of isotopes in environmental sciences: From Omics to ecosystems sciences
2015	R programming Beginners (Coursera)
2006	Phylogeny, Phylogeography and Genetics in Conservation: Use of ID tools for the identification, management and conservation of pelagic sharks in the Pacific Ocean
2006	Advance Topics in Marine Ecology: Global Kelp Systems

SELECTED FIELD WORK & METHODS

2022-24	Field Leader and Coordinator. San Rafael Lagoon National Park and Almirantazgo Sound, Patagonia. Four field campaigns. Focal Species: Leopard Seal. Methods: Remote sampling using a remote biopsy rifle to collect samples, Drone survey, Image post-processing, Stable isotopes analysis, Fatty acids analysis, Scat analysis, Computer vision analysis.
2021-23	Project Director, Field Leader and Coordinator. Juan Fernandez Archipelago. Focal species: Juan Fernandez Fur seal. Methods: Drone population surveys, Remote sampling using a remote biopsy rifle to collect samples of Juan Fernandez Fur seals and image post-processing (build orthophotomosaics, machine learning visual computer technics).
2020-23	Project Chief, Photo-ID Catalog. Focal species: Leopard seals. Methods: Photo-Identification to build a catalog of Chilean leopard seals. Work in progress.
2019-20	Field Technician. Livingston Island, Antarctica. Focal species: Leopard seals. Methods: Full animal handling including full body measurements, fat, blood collection, tagging and take of ultrasound fat layers profiles, whisker collection and biologging instrument attachment.
2014-19	Logistics Coordinator. INACH Antarctic Research Refuge, Antarctica.
2019	Field Technician. Seno Almirantazgo, Patagonia Chile. Focal Species: Elephant seals. Remote sampling of fatty acids using a Remote biopsy rifle.
2014-17	Field Technician. Livingston Island, Antarctica. Focal Species: Antarctic fur seals. Methods: Full female captures including use and administration

	of anesthesia, body measurements, milk and blood collection, whisker collection, recovery assessment and biologging instrument attachment.
2012-13	Field Diving Technician. Western Antarctic Peninsula, Antarctica. Focal Species: Multiple algae species. Methods: Sample collection for genetic analysis, subtidal transects and quadrants, biomass and richness measurements, Photo-quadrants.
2012	Volunteer. Ambue Ari Park, Bolivia. Focal species: Jaguars. Methods: Feeding and walking jaguars
2009-10	Dive Tech Support and Research Associate. Alaska, USA. Focal Species: Kelp forests of different species. Methods: Collection of kelp species, PAM measurements, Underwater transects, Sea urchin measurements, other subtidal short and long term experimental settings
2008-09	Marine Collector. San Diego, USA. Focal species: all kind of kelp forest species. Collecting and maintaining marine species for SDSU classes in marine sciences.

SERVICE TO PROFESSION

Leadership

Council Member, Association of Polar Early Career Scientists (APECS) and APECS Representative of the Expert Group of Birds and Marine Mammals EG-BAMM SCAR Group (2023-up to date)
Member, IUCN Pinniped Expert Group (2024 up to date)
Member, National Representative of the Association of Polar Early Career Scientists (APECS; 2019-2024)
President, APECS-Chile NGO (2019-2022)
Council Member, APECS International (2023-present) and APECS **Representative**, SCAR Expert Group on Birds and Marine Mammals (EG-BAMM)

Journal Reviewer

Revista de Biología Marina y Oceanografía
 Journal of Aquatic Mammals
 Marine Ecology Progress Series
 Mastozoología Neotropical
 Antarctic Science
 Marine Mammal Sciences
 Polar Biology

Students

Bachelor Degree:

Antonia Ponce-Rodríguez. *“Estimación de la dieta de la foca Leopardo (*Hydrurga leptonyx*) en la Patagonia chilena mediante el análisis de ácidos grasos”* Universidad de Valparaíso (**Co-Advisor**)

Master Degree:

Valentina Vergara. *“Percepciones sobre el Lobo Fino de Juan Fernández (*Arctocephalus Philippi*) y su interacción con la pesca artesanal”* Universidad de Buenos Aires. (**Co-Advisor**)

Nicholi Brown. “Use of Photo ID to identify individual Leopard seals of Tierra del Fuego, Chile” Baylor University (**Advisor**)

PhD:

Adrián Pineda-Polanco. *“La geopolítica del Agua y la incertidumbre en escenarios de (in)justicia espacial, conflicto y/o tensión hídrica: el rol del agua en territorios subantárticos”* Universidad de Los Lagos (**Committee member**)

Others

Expert Reviewer of the Intergovernmental Panel on Climate Change (IPCC) Report (2021)

Expert Reviewer of the Sixth Assessment Report (AR6) Chapter 3: “Ocean and coastal ecosystems and their services” (2019)

Expert Reviewer of the Special Report on the Ocean and Cryosphere in a changing Climate (SROCC) Chapter 5: Changing Ocean, Marine Ecosystems and Dependent Communities (2018)

OUTREACH

Communication

Guest Speaker, Norwegian Cruise Line Holdings. Oceania Cruises (2024, one trip to South America - Antarctica) Reagent Cruises (2025, two cruises to South America – Antarctica)

Executive Director and Writer, Antarctic Scientific Embassy blog (2019-2022)

Educator, “Mil Científicos Mil Aulas” program (1,000 scientists, 1000 classrooms program; 2012-17)

Educator, “I Scientific Outreach Fair UC”, Chile (2014)

Judge

Jury, Antarctic Fair Chilean Antarctic Institute (2017-present)

Reviewer & Jury, Explora Program, Chilean Government (2014-present)

Popular Science **Author**, “Biologging: Unveiling hidden behavior”, Boletín Antártico Chileno (2018)

Products **Scientific advisor and co-creator** of the boardgame “ILAN, Exploring the Antarctic Biodiversity” (2022).

<https://www.ilanjuegoantartico.cl/>

Associate Producer/protagonist Documentary “Antarctica; Searching for Adaptation”. (2023)

MEDIA COVERAGE

Spanish

2022 “Una temporada con Lobos” (CAPES, Chile): <https://capes.cl/2022/08/una-temporada-con-los-lobos/>

“Los costos de la maternidad” <https://laderasur.com/articulo/los-costos-de-la-maternidad-lobas-finas-antarticas-trabajan-mas-para-conseguir-el-alimento-durante-la-lactancia/>

2020 “La huella mallorquina en Antártida” (Newspaper: El Mallorquin, Spain)

2020 “Association of Early Career Scientists in Chile” (TV: TVN, Chile)

2017 “Cabo Shirreff, Un oasis para la fauna antártica que cautiva a científicos” (Youtube: EFE, Spain)

2016 “Experiencia antártica: dos científicos chilenos nos cuentan su vida en el continente Helado” (Newspaper: El Definido, Chile)

2016 “Científicos y marinos chilenos colaboran para descifrar el origen de la Antártica (Newspaper: La Tercera, and The Clinic, Chile)

Portuguese

2018 “Antartica-Verao no sul do planeta” (National Geographic, Brazil)

English

2022 “Harnessing the power of computer vision” (Deepomatic, France). <https://deepomatic.com/harnessing-the-power-of-computer-vision-for-monitoring-biodiversity>

2021 Polar Times Podcast episodes “CLvsNO” and “Foca o Roca” (Spotify)

PROFESSIONAL MEMBERSHIPS

- Society for Marine Mammalogy
- Association of Early Career Scientists (APECS)
- American Society of Mammalogists
- The Animal Behavior Society

ADDITIONAL SKILLS

Diving	Open Water (SII), Advanced Diver (PADI), Dive Master (PADI) Scientific Diving (AAUS), Chilean Navy Dive Specialist, Underwater Photography Training Course
First Response	NOLS Wilderness First Aid (USA, need update)
Boat License	California Driving License Chilean Navy small boat operator
Drone License	National Chilean License DGAC 2021 to operate unmanned aerial vehicles (UAVs)
Languages	Bilingual in Spanish and English
Dance	Salsa Instructor Cuban Rhythms (Advanced, 20 years as instructor)

REFERENCES

Dr. Daniel P Costa	(Distinguish Professor University of California, Santa Cruz). Email: costa@ucsc.edu
Dr. Sarah Kienle	(Former Postdoctoral supervisor, Associate Professor at Baylor University). Email: Sarah_Kienle@uri.edu
Dr. José Miguel Fariña	(CAPES researcher and Associated professor Pontificia Universidad Católica de Chile) email: jfarina@bio.puc.cl
Dr. Michael Goebel	(ex-NOAA AMLR Pinniped program director, University of California, Santa Cruz) Email: megoebel@ucsc.edu

