

Email: susana.cardenas.a@upch.pe
scardenas@csa-upch.org
Web: scardenas-alayza.com
Cell: +51 999931218

Susana Cárdenas-Alayza, MSc., PhD.

<https://orcid.org/0000-0002-8828-9552>

Education

- Sep 2018 – Dec 2021* **Université de Montpellier – Universidad Peruana Cayetano Heredia**
PhD in Ecology (*Summa cum laude*) joint degree between France/Peru
- Sep 2008 – May 2012* **University of British Columbia - Vancouver**
Master of Science, Zoology, Canada
- Mar 2000 – Jul 2005* **Universidad Peruana Cayetano Heredia**
Bachelor of Science, Biology, Peru

Skills & Activities

- Skills* Population Ecology, Marine Biology, Conservation Biology, Biodiversity Monitoring, Trophic Ecology
- Languages* Spanish (Native), English (Advanced), French (Intermediate/A2)
- Software* R (Intermediate), Matlab (Basic), Wix (Basic)
- Memberships* Marine Mammal Society, Sociedad Latinoamericana de Mamíferos Acuáticos, Colegio de Biólogos del Perú, PADI Open Water Diver, Pacific Seabird Group

Relevant Work Experience

- 2022 – present* Associate Professor, Department of Biological and Physiological Science. UPCH
- 2022 – present* Director, Center for Environmental Sustainability (CSA), UPCH
- 2022 – present* Professor, Master's Program in Marine Science, Escuela de Posgrado Victor Alzamora Castro, UPCH
- 2018 – 2022* Auxiliary Professor, Department of Biological and Physiological Science. UPCH
- 2013 – present* Director, Punta San Juan Program, CSA, Universidad Peruana Cayetano Heredia (UPCH)
- 2016 – 2018* Director, Center for Environmental Sustainability (CSA), UPCH
- 2013 – 2017* Field Research Programs Coordinator for Peru, Chicago Zoological Society
- 2012* Research Coordinator, Punta San Juan Project. CSA, UPCH
- 2010 – 2012* Project assistant, "Towards Ecosystem-based management of the Peruvian anchovy fishery" Fisheries Center – The University of British Columbia, CSA, UPCH & IMARPE
- 2007 - 2008* Project Assistant, "Living Landscapes between Peru and Bolivia". Wildlife Conservation Society

Thesis Dissertations

- 2021- Mechanisms of coexistence of two sympatric species of pinnipeds, *Arctocephalus australis* and *Otaria byronia*, in Punta San Juan, Peru.* 12/2021, Degree: Doctor in Philosophy, Ecology. Supervisor: Dr. Yann Tremblay (France) & Dr. Dimitri Gutiérrez (Peru). Link: <https://tel.archives-ouvertes.fr/tel-03604632/document>
<https://repositorio.upch.edu.pe/handle/20.500.12866/11644>

2012 - *Prey abundance and population dynamics of South American fur seals (Arctocephalus australis) in Peru*. 05/2012, Degree: Master in Science, Zoology. Supervisor: Dr. Andrew W. Trites doi:[10.13140/RG.2.2.25720.55046](https://doi.org/10.13140/RG.2.2.25720.55046). Link:

<https://open.library.ubc.ca/collections/ubctheses/24/items/1.0072800>

2007 - *Preferencias de uso de sitios para pariciones por hembras de Arctocephalus australis (ZIMMERMANN, 1783) en la Reserva Guanera Punta San Juan, Perú*. 10/2007, Degree: Licenciatura en Ciencias – Biología, (Professional Title equivalent). Supervisor: Dr. Armando Valdés Velásquez, doi: [10.13140/RG.2.2.34109.15841](https://doi.org/10.13140/RG.2.2.34109.15841) Link:

https://www.researchgate.net/publication/319077521_Preferencias_de_uso_de_sitios_para_pariciones_por_hembras_de_Arctocephalus_australis_ZIMMERMANN_1783_en_la_Reserva_Guanera_Punta_San_Juan_Peru

Book Chapters

Susana Cárdenas-Alayza: *Un frágil y privilegiado ecosistema / A fragile and privileged ecosystem*. In: Punta San Juan: Una historia de conservación / Punta San Juan: A conservation story. 07/2023: p. 93. The Living Oceans., ISBN: 9786124682322

Susana Cárdenas-Alayza & Patricia Majluf: *¿Qué está en juego? / What is at stake?* In: Punta San Juan: Una historia de conservación. / Punta San Juan: A conservation story. 07/2023: p. 231. The Living Oceans., ISBN: 9786124682322

Susana Cárdenas-Alayza: *Más de un bicentenario entre el guano y el mar*. In: Desafíos y perspectivas de la situación ambiental en el Perú. INTE-PUCP. 02/2022: p.81-96. INTE-PUCP. URL: <https://repositorio.pucp.edu.pe/index/handle/123456789/183451>

Susana Cárdenas-Alayza: *South American Fur Seal*. In: Encyclopedia of Marine Mammals, 3rd Ed., 07/2018: pages 905-907, Academic Press., ISBN: 9780128043271

Susana Cárdenas-Alayza: *South American Sea Lion*. In: Encyclopedia of Marine Mammals, 3rd Ed., 07/2018: pages 907-910, Academic Press., ISBN: 9780128043271

Michael Valqui, **Susana Cárdenas-Alayza:** *La tercera era del guano: Aves guaneras, cambio climático y pesca*. In: Metas del Perú al Bicentenario, Edited by Consorcio de Universidades, 08/2016: pages 103-108, Consorcio de Universidades., ISBN: 978 9972 704 12 3

Scientific Publications

1. VanCompernelle, M., Morries, J., Calich, H., ...**Cárdenas-Alayza, S.**, Sequeira, A.MM. Vulnerability of highly mobile and wide-ranging megafauna to global anthropogenic treats. Conservation Biology. *Accepted*
2. Ayala, F., Cordel-Maldonado, C., Tume-Ruiz, J., Querevalu Tume, M., Zeta-Flores, M., Quinde, E., Rangel-Veda, A., De-la-Torre, G., Perez-Venega, DJ., **Cárdenas-Alayza, S.** What is going on down south?: A mini review of plastic pollution on marine megafauna in the Humboldt Current System. <https://www.sciencedirect.com/science/article/pii/S2352485524005188>
3. Tang, L., Adkesson, MJ., **Cárdenas-Alayza, S.**, Adamovicz, L., Deming, AC., Wellehan, JFX., Childress, A., Cortes-Hinojosa, G., Colegrove, K, Langan, J., Allender, M. (2024) Otariid gammaherpesvirus 1 in South American fur seals (*Arctocephalus australis*) and a novel related herpesvirus in free-ranging South American sea lions (*Otaria byronia*): prevalence and effects of age, sex, and sample type. Plos One 19(3) e0299404. <https://doi.org/10.1371/journal.pone.0299404>
4. Adkesson MJ, Shlosberg. A, Lehner., AF, Rumbelha, WK, **Cárdenas-Alayza, S.**, Cardeña-Mormontoy, M., Kannan, K. (2024) Measurement of Persistent Organic Pollutants, Perfluorinated compounds, and Toxic Metals in the blood of Humboldt penguins (*Spheniscus humboldti*) at Punta San Juan, Peru using dried blood spots (2024). *Journal of Zoo and Wildlife Medicine* 54(4), 713-720, (9 January 2024). <https://doi.org/10.1638/2023-0047>
5. **Cárdenas-Alayza, S.**, Ayala, F., Ampuero-Merino, A., Majluf, P. (2023) First record of King Penguin (*Aptenodytes patagonicus*) on the coast of Peru. Boletín UNOP 18(1): 17-21 <https://boletinunop.weebly.com/uploads/6/2/2/6/62265985/aptenodytespatagonicus.pdf>
6. Vilchez-Delgado, F., **Cárdenas-Alayza, S.**, Diaz, S., Márquez-Alvis, S., Gúzman, F., Pereda-Sanchez, A., ... & Calvo-Mac, C. (2023). South American Fur Seals (*Arctocephalus australis*) Out

- of Range in Northern Peru. *Aquatic Mammals*, 49(5), 468-474.
<https://doi.org/10.1578/AM.49.5.2023.468>
7. Lopes, F., Oliveira, L. R., Beux, Y., Kessler, A., **Cárdenas-Alayza, S.** ... Bonatto, S. (2023) Genomic evidence for homoploid hybrid speciation in a marine mammal apex predator. *Science Advances*. 9(18), eadf6601 <https://doi.org/10.1126/sciadv.adf6601>
 8. Santillán, L., Pacheco, A. S., Martínez, J. N., Fupuy, J., Barboza, R., **Cárdenas-Alayza, S.**, ... & Ramírez, P. (2023). Distribución de delfín común (*Delphinus* spp.) de hocico corto y hocico largo en base al índice rostral a lo largo de la costa Perú y Chile. *Mastozoología Neotropical*, 30(1), e0908. <https://doi.org/10.31687/saremMN.23.30.1.07.e0908>
 9. Wright, S., Adkesson, M.J., Schnelle, A.M., Allender, M.C. **Cárdenas-Alayza, S.** (2023) Agreement between total leukocyte count methodologies in South American sea lions (*Otaria byronia*) and Peruvian fur seals (*Arctocephalus australis*). *Journal of Wildlife Diseases* 59(2): 315-321. <https://doi.org/10.7589/JWD-D-22-00001>
 10. Ayala, F., Zeta-Flores, M., Ramos-Baldarrago, S., Tume-Ruiz, J., Rangel-Vega, A., Reyes, E., ... & **Cárdenas-Alayza, S.** (2023). Terrestrial mammals of the Americas and their interactions with plastic waste. *Environmental Science and Pollution Research*, 1-12. <https://doi.org/10.1007/s11356-023-26617-x>
 11. Ayala, F., Vizcarra, J. K., Castillo-Morales, K., Torres-Zevallos, U., Cordero-Maldonado, C., Ampuero-Merino, L., ... & **Cárdenas-Alayza, S.** (2023). From social networks to bird enthusiasts: reporting interactions between plastic waste and birds in Peru. *Environmental Conservation*, 1-6. <https://doi.org/10.1017/S037689292300005X>
 12. Angles, R., Adkesson, M.J., **Cárdenas-Alayza, S.**, Adamovicz, L., Allender M.C. (2023) Detection and prevalence of Spheniscid Alphaherpesvirus-1 (SpAHV-1) in a sample of Humboldt penguins (*Spheniscus humboldti*) at Punta San Juan, Peru. *Journal of Zoo and Wildlife Medicine* 54(1): 159-163 <https://doi.org/10.1638/2022-0105>
 13. Doig-Alba, L., Bussalleu, A., **Cárdenas-Alayza S.**, Cardeña-Mormontoy, M., Valdés-Velásquez, A. (2023) Have we achieved a sustainable balance? Evaluating the effects of regulated guano extraction on an important penguin breeding colony (2008–2019). *Global Ecology and Conservation* 41(2023) e02351 <https://doi.org/10.1016/j.gecco.2022.e02351>
 14. **Cárdenas-Alayza S.**, Adkesson, M.J., Gutiérrez, D., Demarcq, H., Tremblay, Y. (2022) Strategies for segregation during foraging in sympatric otariids of the Peruvian upwelling Humboldt Current System. *Marine Ecology Progress Series* 702:153-170. <https://doi.org/10.3354/meps14203>
 15. **Cárdenas-Alayza S.**, Adkesson, M.J., Edwards, M.R., Hirons, A.C., Gutiérrez D, Tremblay Y, Franco-Trecu, V. (2022) Sympatric otariids increase trophic segregation in response to warming ocean conditions in Peruvian Humboldt Current System. *PLoS ONE* 17(8): e0272348. <https://doi.org/10.1371/journal.pone.0272348>
 16. Favarini, M. O., Simão, T. L., Macedo, G. S., Garcez, F. S., Oliveira, L. R., **Cárdenas-Alayza, S.**, ... & Eizirik, E. (2022) Complex evolutionary history of the South American fox genus *Lycalopex* (Mammalia, Carnivora, Canidae) inferred from multiple mitochondrial and nuclear markers. *Diversity*, 14(8), 642. <https://doi.org/10.3390/d14080642>
 17. **Cárdenas-Alayza S.**, Torres, D.A., Gutiérrez D, Tremblay Y. (2022) Resource partitioning as a mechanism for trophic segregation in sympatric otariids from the productive upwelling Peruvian Humboldt Current System. *Austral Ecology* 0: 1-16 <https://doi.org/10.1111/aec.13158>
 18. Ayala, F., Castillo-Morales, K., & **Cárdenas-Alayza, S.** (2022) Impact of marine debris recorded in a sympatric colony of otariids in the south coast of Peru. *Marine Pollution Bulletin*, 174, 113281. <https://doi.org/10.1016/j.marpolbul.2021.113281>
 19. Ayala, F., Lajo-Salazar, L. & **Cárdenas-Alayza, S.** (2021) White-naped squirrels use plastic waste for nest construction in agricultural areas of northern Peru, *International Journal of Environmental Studies*, 79:4, 724-730, [10.1080/00207233.2021.1950363](https://doi.org/10.1080/00207233.2021.1950363)
 20. Kane, L.P., Adkesson, M.J., Sheldon, J.D., Allender, M.C., Jankowski, G., **Cárdenas-Alayza, S.** (2021) Measurement of intraocular pressure using rebound tonometry in anesthetized Peruvian fur seals (*Arctocephalus australis*) from Punta San Juan, Peru (2021) *Journal of Zoo and Wildlife Medicine* 52(4), 1217-1223. <https://doi.org/10.1638/2020-0222>

21. Edwards, M.R., **Cárdenas-Alayza S.**, Adkesson, M.J., Daniels-Adulahad, M, Hiron, A.C. (2021) Peruvian fur seals as Archivists of El Niño Southern Oscillation Effects. *Frontiers in Marine Science* 8:1657 <https://doi.org/10.3389/fmars.2021.651212>
22. Watson, M.K, Langan, J.N., Allender, M.C., Cardeña, M. **Cárdenas-Alayza, S.**, Adkesson, M.J. (2021) Health assessment of guanay cormorant (*Phalacrocorax bougainvillii*) and Peruvian pelican (*Pelecanus thagus*) populations at Punta San Juan, Peru. *Journal of Zoo and Wildlife Medicine* 52(3), 975-985, <https://doi.org/10.1638/2019-0119.1>
23. Cortes-Hinojosa, G., Adkesson, M.J., **Cárdenas-Alayza, S.**, Seguel, M., Pavés, H., Wellehan, J.F.S. (2021) Adenovirus Diversity in Fur seal and Penguin colonies of South America. *Journal of Wildlife Diseases* 57 (4): 964–969 <https://doi.org/10.7589/JWD-D-20-00118>
24. Loaiza Alamo, I., De Boeck, G., Alcazar, J., Campos, D., **Cárdenas-Alayza, S.**, Ganoza Gallardo, M.J., Gómez-Sánchez, M., Miglio, M., DeTroch, M. (2021) Trophic interactions and metal transfer in marine ecosystems driven by the Peruvian scallop *Argopecten purpuratus* aquaculture. *Journal of the World Aquaculture Society*. <https://doi.org/10.1111/jwas.12822>
25. **Cárdenas-Alayza, S.**, Gutiérrez, D., Tremblay, Y. (2021) Trends in sympatric pinniped populations suggest resource limitations in the Peruvian Humboldt Current System. *Marine Environmental Research* 169:105349 <https://doi.org/10.1016/j.marenvres.2021.105349>
26. Ayala, F., Cardeña, M.A., **Cárdenas-Alayza, S.** Registros de Microplásticos en Fecas del León Marino Sudamericano (*Otaria byronia* Blainville, 1820) colectadas en la Reserva Nacional Punta San Juan (2021) *Revista Internacional de Contaminación Ambiental* 37, 273-279. <https://doi.org/10.20937/RICA.53745>
27. Lopes, F., Oliveira, L. R., Kessler, A., Crespo, E., **Cárdenas-Alayza, S.**, Majluf, P., ... & Bonatto, S. L. (2021) Gene-tree Species-tree Discordance in the Eared Seals is best explained by Incomplete Lineage Sorting following Explosive Radiation in the Southern Hemisphere. *Systematic Biology*, 70(4):786-802 <https://doi.org/10.1093/sysbio/syaa099>
28. Perez-Venegas, D. J., Toro-Valdivieso, C., Ayala, F., Brito, B., Iturra, L., Arriagada, M., ... & **Cárdenas-Alayza, S.** (2020) Monitoring the occurrence of microplastic ingestion in Otariids along the Peruvian and Chilean coasts. *Marine Pollution Bulletin*, 153, 110966. <https://doi.org/10.1016/j.marpolbul.2020.110966>
29. Colchao, P., Adkesson, M. J., Allender, M. C., Fascetti, A. J., Cardeña, M., **Cárdenas-Alayza, S.**, ... & Deem, S. . (2020) Circulating nutrient concentrations in free-ranging Humboldt penguins (*Spheniscus humboldti*) in Punta San Juan, Peru. *Zoo Biology*. <https://doi.org/10.1002/zoo.21540>
30. Chiu-Werner, A., Ceia, F.R., **Cárdenas-Alayza, S.**, Cardeña-Mormontoy, M., Adkesson, M.J., Xavier, J. (2019) Inter-annual isotopic niche segregation of wild Humboldt penguins through years of different El Niño intensities. *Marine Environmental Research*: 150(2019):104755. <https://doi.org/10.1016/j.marenvres.2019.104755>
31. Sheldon, J.D., Adkesson, M.J., Allender, M.C., Jankowski, G., **Cárdenas-Alayza, S.** (2019) Measurement of Intraocular Pressure Using Rebound Tonometry in Anesthetized Free-ranging South American Sea Lions (*Otaria byronia*). *Journal of Wildlife Diseases*: 55(4): 885-888. <https://doi.org/10.7589/2018-08-207>
32. Adkesson, M. J., Levensgood, J. M., Scott, J. W., Schaeffer, D. J., Panno, B., Langan, J. N., **Cárdenas-Alayza S.**, De la Puente, S., Majluf, P. & James-Yi, S. (2019) Analysis of Toxic and Essential Elements in the Blood and Feathers of Humboldt Penguins (*Spheniscus humboldti*) at Punta San Juan, Peru. *Journal of Wildlife Diseases*: 55 (2): 438-443. <https://doi.org/10.7589/2018-03-081>
33. Seguel M., Calderón - Mayo KI., Colegrove K., Adkesson M.J, **Cárdenas-Alayza S.** & Paredes E. (2018) Helminth and respiratory mite lesions in Pinnipeds from Punta San Juan, Peru. *Acta Parasitologica* 63(4). <https://doi.org/10.1515/ap-2018-0103>
34. Adkesson, M.J., Levensgood, J.M., Scott, J.M., Schaeffer, D.J., Panno, B., Langan, J.N., **Cárdenas-Alayza, S.**, De la Puente, S., Majluf, P., Yi, S. (2018) Assessment of polychlorinated biphenyls, organochlorine pesticides, and polybrominated diphenyl ethers in the blood of Humboldt penguins (*Spheniscus humboldti*) from the Punta San Juan marine protected area, Peru. *Journal of Wildlife Diseases* 54(2), 2018. <https://doi.org/10.7589/2016-12-270>
35. Ampuero Merino, L.P., Ayala Tores, F., **Cárdenas-Alayza, S.** (2017) Primer registro documentado de la Dormilona de Vientre Canela (*Muscisaxicola capistratus*) para la costa

- peruana durante su migración austral. *Boletín Informativo de la Unión de Ornitólogos del Perú (UNOP)*. Vol 12 (1): 11-14.
https://boletinunop.weebly.com/uploads/6/2/2/6/62265985/boletin_unop_vol_12_nº1_2017_-_ampuero.pdf
36. Oliveira, L. R.d, Gehara, M. C., Fraga, L. D., Lopes, F., Túnez, J. I., Cassini, M. H., Majluf, P., **Cárdenas-Alayza, S.** [...], & García, N. (2017) Ancient female philopatry, asymmetric male gene flow, and synchronous population expansion support the influence of climatic oscillations on the evolution of South American sea lion (*Otaria flavescens*). *PloS ONE*, 12(6), e0179442.
<https://doi.org/10.1371/journal.pone.0179442>
 37. Sheldon, J. D., Adkesson, M. J., Allender, M. C., Jankowski, G., Langan, J., Cardeña, M., & **Cárdenas-Alayza, S.** (2016) Determination of Tear Production and Intraocular Pressure with Rebound Tonometry in Wild Humboldt Penguins (*Spheniscus humboldti*). *Journal of Avian Medicine and Surgery*, 31(1), 16-23. <https://doi.org/10.1647/2015-134>
 38. Fire, S. E., Adkesson, M. J., Wang, Z., Jankowski, G., **Cárdenas-Alayza, S.**, & Broadwater, M. (2016) Peruvian fur seals (*Arctocephalus australis ssp.*) and South American sea lions (*Otaria byronia*) in Peru are exposed to the harmful algal toxins domoic acid and okadaic acid. *Marine Mammal Science*, 33 (2). <https://doi.org/10.1111/mms.12371>
 39. Jankowski, G., Adkesson, M. J., Saliki, J. T., **Cárdenas-Alayza, S.**, & Majluf, P. (2015) Survey for infectious disease in the South American fur seal (*Arctocephalus australis*) population at Punta San Juan, Peru. *Journal of Zoo and Wildlife Medicine*, 46(2), 246-254. <https://doi.org/10.1638/2014-0120.1>
 40. **Cárdenas-Alayza, S.**, Cardeña-Mormontoy, M.A. (2012) The Punta San Juan Project- Protecting One of the World's Largest Colonies of Humboldt Penguins. *Penguin Conservation* 16 (2):10-15. https://www.researchgate.net/publication/319077071_The_Punta_San_Juan_Project-Protecting_One_of_the_World's_Largest_Colonies_of_Humboldt_Penguins
 41. Cossíos, D., Alcázar-García, P., Fajardo-Quispe, U., Chávez, K., Alfaro-Shigueto, J., **Cárdenas-Alayza, S.**, [...], Ruiz, E. (2012) El orden Carnivora (Mammalia) en el Perú: Estado del conocimiento y prioridades de investigación para su conservación. *Revista Peruana de Biología* 19 (1): 17-26. http://www.scielo.org.pe/scielo.php?pid=S1727-99332012000100003&script=sci_arttext&tlng=en
 42. Oliveira, L. R. de, Loizaga De Castro, R., **Cárdenas-Alayza, S.**, & Bonatto, S. L. (2012) Conservation genetics of South American aquatic mammals: an overview of gene diversity, population structure, phylogeography, non- invasive methods and forensics. *Mammal Review*, 42(4), 275-303. <https://doi.org/10.1111/j.1365-2907.2011.00201.x>
 43. Chiu Werner, A., **Cárdenas-Alayza, S.**, Cardeña Mormontoy, M., Bussalleu Cavero, A., Guerrero Bustamante, P., Sandoval García, F. & Y. Tremblay. (2011) La ruta del pingüino: Uso de hábitat marino y patrón de atención al nido por el Pingüino de Humboldt (*Spheniscus humboldti*) en Punta San Juan, Perú. *Boletín Informativo de la Unión de Ornitólogos del Perú (UNOP)* 6 (2): 21-27. https://www.guzlop-editoras.com/web_des/bio01/zoo/pld0706.pdf

*****Under revision:**

1. Cáceres, BE., Ampuero-Merino, LP., Torres-Castillo, DA., **Cárdenas-Alayza, S.** First record of breeding success of Kelp gulls (*Larus dominicanus*) in Punta San Juan, Peru at Punta San Juan, Peru. *Boletín de Union de Ornitólogos del Perú*. **Submitted.**
2. Johnson, SJ., Adkesson, MJ., **Cárdenas-Alayza, S.**, Tang, KN., Allender, MA. Characterization of erythrocyte Sedimentation in South American Sea Lions (*Otaria byronia*) as an indicator of Inflammation. *Journal of Wildlife Diseases*. **Submitted.**
3. Jerí-Vidal, JC, Franco-Trecu, V., **Cárdenas-Alayza, S.** Survival of Peruvian fur seal pups: Evaluating the effects of physiological and environmental factors in a declining population. *Deep Sea Research II: Tropical Studies*. **Submitted.**
4. Munaco, ML, Levin, M., Adkesson, MJ., **Cárdenas-Alayza, S.**, Giarikos, DG., Hiron, A. Cytokine Profile Assessment from Peruvian Pinniped (*Arctocephalus australis* and *Otaria byronia*) Plasma. *Journal of Veterinary Immunology and Immunopathology*. **Submitted.**

5. Doig, L. Lau-Alarcon, K., Torres, D., Chiu-Werner, A., Cardeña-Mormontoy, M, **Cárdenas-Alayza, S.** Evaluating a decade of change: Variation in the Sea surface temperature within the foraging range of a declining population of Humboldt penguins in Peru. *Deep Sea Research II: Tropical Studies*. **Submitted**.
6. Aramayo, V., Pacheco, A.S., Ochoa, D., Gonzales-Pestana, A., Uribe, R., **Cárdenas-Alayza, S.**, Briceño-Zuloaga, F. The Northern Humboldt Current System: rethinking the complexity of this large upwelling-fueled region in a changing climate scenario. *In prep*.

Technical Reports

- **Susana Cárdenas-Alayza**, Larissa Rosa de Oliveira, Enrique A. Crespo: *Arctocephalus australis* (South American fur seal). *The IUCN Red List of Threatened Species 2016*. Report number: ISSN: 2307-8235, <http://dx.doi.org/10.2305/IUCN.UK.2016-1.RLTS.T2055A45223529.en>
- **Susana Cárdenas-Alayza**, Enrique A Crespo, Larissa Rosa de Oliveira: *Otaria byronia*, *South American Sea Lion*. *The IUCN Red List of Threatened Species*. Report number: ISSN: 2307-8235, <http://dx.doi.org/10.2305/IUCN.UK.2016-1.RLTS.T2055A45223529.en>
- **Susana Cárdenas-Alayza**, Larissa Rosa de Oliveira: *Arctocephalus australis* (Peruvian/Northern Chilean subpopulation). *The IUCN Red List of Threatened Species 2016*. Report number: ISSN: T72050476A72050985, <http://dx.doi.org/10.2305/IUCN.UK.2016-1.RLTS.T72050476A72050985.en>

Committees

- 2022 - *present* IMMA – Important Marine Mammal Areas Task Force Member
- 2020 – 2021 SERFOR – Peru. Categorization of Endangered Species in Peru.
Species: *South American fur seal*, *South American sea lion*, *Humboldt penguin*, *Guanay cormorant*
- 2018 – *present* SOLAMAC (Latin American Society of Aquatic Mammals) - Member of the scientific committee
- 2016 IUCN – Penguin Specialist Group. Species: *Humboldt penguin*
- 2015 – *present* COMUMA – MINAM. Multisectoral Commission for Marine-Coastal Environmental Management. Ministry of the Environment of Peru
- 2013 – *present* IUCN - Pinniped Specialist Group. Species: *South American fur seal*, *South American sea lion*

Student supervision (graduated)

- Vela Humán, María Fernanda** (2023) “Variación de estrategias nutricionales de especies simpátricas de lobos marinos residentes en el Perú en relación a factores climáticos” Trabajo de investigación para optar por el Grado de Bachiller en Ciencias con Mención en Biología. [Undergraduate research Project for Bachelor in Science degree]. Facultad de Ciencias e Ingeniería. Universidad Peruana Cayetano Heredia. Lima, Peru 13p
- Ganoza Gallardo, María José** (2023) “Spatial variation in fatty acid profiles of macrobenthos from a pristine site and a metal-polluted site in a subtidal rocky shore ecosystem”. Thesis submitted in partial fulfillment for master degree in Marine and Lacustrine Science and Management. Interuniversity Master of Science in Marine and Lacustrine Science and Management. Universiteit Antwerpen – Ghent University - Vrije Universiteit Brussels, Belgium. 43p **Co-supervisor**
- Freitas, Analisa** (2023) “Building All From the Small: Valuing Local Marine Conservation Projects in Peru”. Capstone Project. Master of Advanced Studies in Marine Biodiversity & Conservation (2022-2023). Center for Marine Biodiversity & Conservation. Scripps Institution of Oceanography at University of California at San Diego, California, USA. 41p
- Parodi Horny, Rafaella** (2021) “Ecología de forrajeo de dos especies de pinnípedos simpátricos estimada a través del análisis de ácidos grasos”. Trabajo de investigación para optar por el Grado de Bachiller en Ciencias con Mención en Biología. [Undergraduate research Project for Bachelor in Science degree] Facultad de Ciencias y Filosofía. Universidad Peruana Cayetano Heredia. Lima, Peru 22p
- Torres Castillo, Daniel Anthoni** (2019) “Variación en la ocurrencia de las principales especies presa en la dieta del lobo marino fino (*Arctocephalus australis*) entre periodos Pre y Post El Niño 1997/98 en

Punta San Juan-Ica”. Trabajo para optar por Título Profesional de Biólogo-Microbiólogo. [Thesis for the Professional Title in Biology/ Microbiology]. Facultad de Ciencias. Universidad Nacional Jorge Basadre Grohmann. Lima, Peru 100p. **Co-supervisor**

Jerí Vidal, Juan Carlos (2019) “Supervivencia durante el primer año de vida del lobo fino sudamericano (*Arctocephalus australis*) en Punta San Juan, Ica, Perú”. Tesis para optar por el Título de Licenciado en Ciencias con Mención en Biología. [Thesis for the Professional Title in Biology]. Facultad de Universidad Peruana Cayetano Heredia.

Students under supervision (not-graduated)

Herencia Chuquihuanga, Yuraq “Conectando con la Naturaleza: El impacto de las visitas guiadas educativas a la Reserva Nacional Punta San Juan (RNSIIPG-PSJ) en los conocimientos y percepciones hacia la naturaleza de los residentes de San Juan de Marcona”. Thesis Project for the Professional Title in Biology. Facultad de Ciencias e Ingeniería. Universidad Peruana Cayetano Heredia.

Vinatea Chávez, Rosa Amelia “Identificación de depredadores marinos como potenciales indicadores de cambios ambientales en la Región Norte del Sistema de la Corriente de Humboldt a partir de registros obtenidos por pescadores industriales”. Masters Thesis Project. Maestría en Ciencias del Mar. Facultad de Ciencias e Ingeniería. Universidad Peruana Cayetano Heredia

Parodi Horny, Rafaella “Segregación de presas según talla y temporada por dos especies de pinnípedos simpátricos en 2015 y 2018 en Punta San Juan”. Thesis Project for the Professional Title in Biology. Facultad de Ciencias e Ingeniería. Universidad Peruana Cayetano Heredia.

Vela Humán, María Fernanda “Variación de estrategias nutricionales de especies simpátricas de lobos marinos residentes en el Perú en relación a factores climáticos”. Thesis Project for the Professional Title in Biology. Facultad de Ciencias e Ingeniería. Universidad Peruana Cayetano Heredia.

Ally Sheehan “The use of *Otaria byronia* and *Arctocephalus australis* canines as indicators of trace element bioaccumulation in South American ecosystems”. Proposal research for Masters in Marine Science. Nova Southeastern University Oceanographic Center.

Thesis Evaluation Committee

Whitmer, Emily. “Molecular surveillance for known and novel pathogens in Humboldt penguins (*Spheniscus humboldti*)”. Master’s Thesis. Program in Ecology, Evolution and conservation biology. University of Illinois. Urbana-Champaign, IL, USA. June 14th, 2024

González Ochante, Karolyne Julissa. “Dinámica Poblacional de las Especies de Acartia (Crustacea: Copepoda: Calanoida) del Sistema Estuarino-Lagunar de Cananea – Iguape, São Paulo, Brasil” Bachelors Thesis. Universidad Peruana Cayetano Heredia. Lima, Peru. July 20th, 2023

Cavero Rojas, Claudia “Patrones macroevolutivos de los Odontoceti durante los últimos 10 millones de años (Mioceno tardío-actualidad) y la evolución de los delfines oceánicos (Delphinidae).” Master’s Thesis Project evaluation. Maestría en Ciencias del Mar. Facultad de Ciencias e Ingeniería. Universidad Peruana Cayetano Heredia. Lima, Peru. June 28th, 2023

González del Carpio, Diego Daniel. “Flexibilidad del Comportamiento de Forrajeo del Cormorán Guanay (*Phalacrocorax bougainvillii*) bajo un ambiente marino impredecible”. Bachelors Thesis. Universidad Peruana Cayetano Heredia. Lima, Peru. September 9th, 2022

Silviano Aguilar, Elizabeth & De Souza Reátegui, Nathaly Mía. “Influencia de los Factores Ambientales en la composición de la comunidad de macroinvertebrados bentónicos y grupos funcionales alimenticios en tres sectores de la cuenca del Río Chillón” Bachelors Thesis. Universidad Peruana Cayetano Heredia. Lima, Peru. April 5th, 2022

Torres Castillo, Daniel Anthoni. “Efecto del tamaño de nidada en el esfuerzo de forrajeo del cormorán guanay (*Phalacrocorax bougainvillii*) en la Reserva Nacional Punta San Juan, Ica. Master’s Project Proposal. Universidad Peruana Cayetano Heredia. Lima, Peru. March 30th, 2022

Fernández Rodríguez, Sol María Isabelle. “Evaluación de la dinámica poblacional de gecko de Lima *Phyllodactylus sentosus* (Reptilia: Phyllodactylidae)” Bachelors Thesis. Universidad Peruana Cayetano Heredia. Lima, Peru. October 10th, 2019

Amaro Giraldo, Lady Madeleine “Variaciones interanuales (1996-2015) de la dieta del Guanay *Phalacrocorax bougainvillii* a partir de la reconstrucción del análisis de bolos residuales enterrados

en depósitos de guano”. Master’s Thesis. Universidad Peruana Cayetano Heredia. Lima, Peru.
December 7th, 2017

Recent Awards & Scholarships (last 5 years)

- 2022 Award - Rising Conservation Leader Award – Chicago Zoological Society
2021 Award - Carlos Ponce 2021 – Mar Peruano
2021 Award - Rostros del Bicentenario – Universidad de Lima
2018 - 2021 Academic scholarship For Doctoral Studies. French-Peru Doctoral School for Life Sciences (Ecology) 34,000 €

Recent Grants (last 5 years)

- 2024 Island Conservation Partnership with National Fish and Wildlife Foundation (NFWF) - Invasive species eradication in Punta San Juan \$128,000
2024 Chicago Board of Trade Endangered Species Fund – Chronic Stress signals using fecal glucocorticoid metabolites in pinnipeds \$7,000
2024 Kansas City Zoo Conservation Grant - Ocean Awareness \$8,172
2024 Punta San Juan Program Consortium Annual Operations Funding \$ 122,612
2023 Dolphin Quest – Cost-effective methods for small cetacean research & conservation in Peru \$16,140
2023 Kansas City Zoo Conservation Grant - Ocean Awareness \$10,718
2023 Punta San Juan Program Consortium Annual Operations Funding \$ 102,000
2022 Interdisciplinary Research Funds, Universidad Peruana Cayetano Heredia - \$10,000
2022 Punta San Juan Program Consortium Annual Operations Funding \$ 102,000
2021 Multiple small grants and donations for Temporal housing Project in Punta San Juan \$58,400
2021 Punta San Juan Program Consortium Annual Operations Funding \$ 122,612
2020 Punta San Juan Program Consortium Annual Operations Funding \$ 108,000
2019 Small Grant in Aid of Research, Society for Marine Mammalogy – Stable isotopes analyses in pinniped whiskers \$2,000
2019 Punta San Juan Consortium Annual Operations Funding \$ 108,500

References:

Dra. Patricia Majluf, PhD.
Consulting Scientist, Oceana, Peru
Email: pmajluf@spondylus.org

Dr. Michael Adkesson, DVM.
CEO, Chicago Zoological Society, USA
Email: Michael.Adkesson@czs.org

Dr. Andrew Trites, PhD.
Professor, University of British Columbia - Canada
Email: a.trites@oceans.ubc.ca

Dr. Dimitri Gutiérrez, PhD.
Professor, Marine Science Laboratory, Universidad Peruana Cayetano Heredia - Peru
Director General de Investigaciones Oceanográficas y Cambio Climático, IMARPE
Email: dimitri.gutierrez.a@upch.pe

Dr. Yann Tremblay, PhD.
Professor, Université de Montpellier - France
Researcher, MARBEC, IRD
Email: yann.tremblay@ird.fr