

## **Dr. Carolyn M. Kurle**

UC San Diego · Division of Biological Sciences · Ecology, Behavior, and Evolution (EBE) Section  
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### **Education**

2008 Ph.D. in Ecology and Evolutionary Biology, University of California Santa Cruz  
D. Croll and B. Tershy (Co-Advisors)  
1998 M.Sc. in Wildlife and Fisheries Sciences, Texas A&M University  
G. Worthy (Advisor)  
1994 B.Sc. in Zoology, University of Washington  
B.A in German Language and Literature, University of Washington

### **Academic and Research Positions**

2017-present Associate Professor, Division of Biological Sciences, Ecology, Behavior, and Evolution Section, University of California, San Diego  
2010-2017 Assistant Professor, Division of Biological Sciences, Ecology, Behavior, and Evolution Section, University of California, San Diego  
2008-2010 Post-doctoral Research Associate with Dr. Bradley Cardinale, Ecology, Evolution, and Marine Biology, University of California, Santa Barbara  
2006 Course Instructor, *Marine Conservation Biology*, University of California, Santa Cruz  
2005 Scientific Consultant, National Ocean Service/NOAA, Long Beach, California. Expert analyses and damage assessment of coastal ecosystems in the Aleutian Islands, Alaska after the *Selendang Ayu* oil spill.  
1999-2001 Research Fisheries Biologist, Alaska Fisheries Science Center's National Marine Mammal Laboratory (NMFS/NOAA), Seattle, Washington. Studied foraging ecology and population dynamics of marine vertebrates in Alaskan waters  
1994-1996 Research Technician, Alaska Fisheries Science Center's National Marine Mammal Laboratory (NMFS/NOAA), Seattle, Washington

### **Awards and Honors**

- Outstanding Service to UCSD students with disabilities award. 2014. Given to faculty demonstrating exceptional care with disabled students in their classes.
- Hellman Fellowship. 2011-2012. The Hellman Fellows program provides financial support for beginning faculty who show great potential and distinction in their research.
- Murray F. Buell Award. 2006. Given at the annual meeting of the Ecological Society of America for the best student presentation.
- Most Outstanding Student Presentation Award. 2006. Given at the biennial meeting of the International Congress for Conservation Biology for best student presentation.
- Special Service Awards (5). 1999-2001. Given to recognize outstanding service and research achievement by the Department of Commerce/NOAA/NMFS.
- Most Distinguished Graduate Student Award. 1998. A departmental award given to one graduate student each year for outstanding research contributions. Wildlife and Fisheries Sciences Department, Texas A&M University.
- Inducted as member of Delta Phi Alpha. 1993. A National German Honor Society recognizing excellence in Germanic studies.

## UCSD Teaching

- BILD 3: Introduction to Ecology and Evolution (yearly; 450 to 750 students)
- BIEB 130: Marine Conservation Biology (every other year; 190 students)

## Refereed Articles

\*graduate or +undergraduate student or #post-doctoral author mentored by Kurle

43. Krause, D\* and **Kurle CM** (in prep) The diet of leopard seals (*Hydrurga leptonyx*) at Cape Shirreff, Antarctic Peninsula examined with scat and stable isotope analysis.
42. Dannecker, D<sup>+,\*</sup>, Goebel, M, and **Kurle, CM** (in prep) Spatial segregation in habitat use for female Antarctic fur seals during the non-breeding season in the southern hemisphere: implications for the growing krill fishery.
41. Zeppelin, T, Kelleher, C<sup>+,\*</sup>, Rea, L, Ream, R, and **Kurle, CM** (in prep) Foraging and migration patterns for juvenile male northern fur seals (*Callorhinus ursinus*) from St. Paul Island, Alaska.
40. Steinitz, R<sup>+,\*</sup>, Pasachnik, SA, and **Kurle CM** (in prep) Dietary niche partitioning in two sympatric species of rock iguanas in the Dominican Republic. *Oikos*
39. Finkelstein, ME, **Kurle, CM**, Bakker, VJ, Doak, DF, Copeland, H, Wolstenholme, R, Brandt, J, Burnett, J, Smith, DR (in prep) California condors at risk from land to sea: no safe place for a California scavenger.
38. McFadden, KW, Sterling, E, Naro-Maciel, E, and **Kurle, CM** (in prep) Improving estimates of marine turtle foraging ecology via mathematical predictions of stable isotope discrimination factors and cross tissue stable isotope comparisons from wild green turtles
37. Hetherington, E\*, Benson, S, **Kurle, CM**, Popp, BN, and Seminoff, JA (in prep) Re-examining trophic dead ends: stable isotope values link gelatinous zooplankton to leatherback turtles in the California Current.
36. Hetherington, E\*, Popp, BN, Ohman, M, and **Kurle, CM** (in review) Effects of chemical preservation on bulk and amino acid isotope values of organismal tissues. *Rapid Communications in Mass Spectrometry*
35. Howard, TJ<sup>+,\*</sup>, Orr, AJ, and **Kurle, CM** (in prep) Comparison of foraging patterns between northern fur seal (*Callorhinus ursinus*) pups and adult females from San Miguel Island, California, using stable isotope analysis.
34. Liu, Andrea<sup>+,\*</sup>, Zeppelin, T, and **Kurle, CM** (in prep) Temporal variability in the stable carbon and nitrogen isotope values from common mid-trophic level species in the Bering Sea.
33. Richardson, KM<sup>+,\*</sup>, Iverson, JB, and **Kurle, CM** (in review) Marine subsidies cause gigantism of iguanas in the Bahamas. *Oecologia*
32. Banerjee, SM<sup>+,\*</sup>, Frey, A, **Kurle, CM**, and Stewart, KR (in review) The influence of multiple paternity on genetic and morphological variation in leatherback hatchlings (*Dermochelys coriacea*) at Sandy Point National Wildlife Refuge, US Virgin Islands. *Marine Biology*
31. Hetherington, E\*, Seminoff, JA, Popp, BN, Dutton, P, Robison, L, and **Kurle, CM** (in press) Linking oceanography to long-term trends in foraging ecology and demographics of a threatened species: an isotopic perspective. *Oecologia*
30. Fleming, AH, Kellar, NM, Allen, CD, and **Kurle, CM** (in press) Combining stable isotope and hormone analyses in marine megafauna research and conservation. *Frontiers in Marine Science*, Special issue: Integrating Emerging Technologies into Marine Megafauna Conservation and Management

29. Turner Tomaszewicz, CN\*, Seminoff, JA, Avens, L, Goshe, LR, Rodriguez-Baron, JM, Peckham, SH, and **Kurle, CM** (2018) Expanding the coastal forager paradigm: Long-term pelagic habitat use by green turtles (*Chelonia mydas*) in the eastern Pacific Ocean. *Marine Ecology Progress Series*. 587:217-234
28. Turner Tomaszewicz, CN\*, Seminoff, JA, St. Ledger, J, and **Kurle, CM** (2017) Stable isotope discrimination factors and between tissue isotope comparisons for bone and skin from captive and wild green turtles (*Chelonia mydas*). *Rapid Communications in Mass Spectrometry*. 31:1903-1914. DOI: 10.1002/rcm.7974
27. Stewart, JD, Rohner, CA, Araujo, G, Avila, J, Fernando, D, Forsberg, K, Ponzio, A, Rambahianarison, JM, **Kurle, CM**, and Semmens BX (2017) Trophic overlap in mobulid rays: insights from stable isotope analysis. *Marine Ecology Progress Series*. 580:131-151
26. Finkelstein, ME, Bakker, VJ, Copeland, H, Burnett, J, Jones, J, Brandt, J, and **Kurle, CM** (2017) Reply to Comment on "Terrestrial scavenging of marine mammals: cross-ecosystem contaminant transfer and potential risks to endangered California condors (*Gymnogyps californianus*)." *Environmental Science and Technology*. 51:5349-5350
25. Hopkins III, JB#, Ferguson, J, Tyers, D, and **Kurle, CM** (2017) Selecting the best stable isotope mixing model to estimate grizzly bear diets in the Greater Yellowstone Ecosystem. *PLOS One*. 19 pp. doi.org/10.1371/journal.pone.0174903
24. **Kurle, CM** and McWhorter, JK+,\* (2017) Spatial and temporal variability within marine isoscapes: implications for interpreting stable isotope data from marine systems. *Marine Ecology Progress Series*. 568:31-45
23. Turner Tomaszewicz, CN\*, Seminoff, JA, Peckham, SH, Avens, L, and **Kurle, CM** (2017) Intrapopulation variability in the timing of ontogenetic habitat shifts in sea turtles revealed using  $\delta^{15}\text{N}$  values from bone growth rings. *Journal of Animal Ecology*. 86:694-704
22. **Kurle, CM**, Bakker, V, Copeland, H, Burnett, J, Jones, J, Brandt, J, and Finkelstein, M (2016) Terrestrial scavenging of marine mammals: cross-ecosystem contaminant transfer and potential risks to endangered California condors (*Gymnogyps californianus*). *Environmental Science and Technology*. 50:9114-9123
21. Turner Tomaszewicz, CN\*, Seminoff, JA, Ramirez, MD, and **Kurle, CM** (2016) Techniques for extracting sequential annual bone growth layers for stable isotope analysis. *Methods in Ecology and Evolution*. 7:556-564
20. Steinitz, R+,\* , Lemm, JM, Pasachnik, SA, and **Kurle, CM** (2016) Diet-tissue stable isotope ( $\Delta^{13}\text{C}$  and  $\Delta^{15}\text{N}$ ) discrimination factors for multiple tissues from terrestrial reptiles. *Rapid Communications in Mass Spectrometry*. 30:9-21
19. Hopkins III, JB# and **Kurle, CM** (2016) Measuring the realized niches of animals using stable isotopes: from rats to bears. *Methods in Ecology and Evolution*. 7:210-221
18. Turner Tomaszewicz, CN\*, Seminoff, JA, and **Kurle, CM** (2015). Effects of demineralization on the stable isotope analysis of bone samples. *Rapid Communications in Mass Spectrometry*. 29:1879-1888
17. Bowden, JJ#, Eskildsen, A, Hansen, RR, Olsen, K, **Kurle, CM**, and Høye, TT (2015) High-arctic butterflies become smaller with rising temperatures. *Biology Letters*. 11: 20150574
16. Sherer, RD, Doll, AC, Rea, LD, Christ, AM, Stricker, CA, Witteveen, B, Kline, TC, **Kurle, CM**, and Wunder, MB (2015) Stable isotope values in pup vibrissae reveal geographic variation in diets of gestating Steller sea lions (*Eumetopias jubatus*). *Marine Ecology Progress Series*. 527:261-274
15. Turner Tomaszewicz, CN\*, Seminoff, JA, Avens, L, Goshe, LR, Peckham, SH, Rodriguez-Baron, JM,

- Bickerman, K, and **Kurle CM** (2015) Determining age and residency duration of loggerhead turtles (*Caretta caretta*) at a North Pacific bycatch hotspot using skeletochronology. *Biological Conservation*. 185:134-142
14. Walter, DW, **Kurle, CM**, and Hopkins III, JB (2014) Applications of stable isotope analysis in mammalian ecology. Editorial for Special Issue in *Isotopes in Environmental and Health Studies*. 50:287-290.
  13. **Kurle, CM**, Koch, PL, Tershy, BR, and Croll, DA (2014) The effects of sex, tissue type, and dietary components on stable isotope discrimination factors ( $\Delta^{13}\text{C}$  and  $\Delta^{15}\text{N}$ ) in mammalian omnivores. *Isotopes in Environmental and Health Studies, Special Issue*. 50:307-321.
  12. Parnig, E+\*, Crumpacker, A, and **Kurle, CM** (2014) Stable carbon and nitrogen isotope discrimination factors for fur from four felid species. *Journal of Mammalogy* 95:151-159
  11. **Kurle, CM**, Kappel, CV, Hope, DD, Lam, A\* (2013) Invasion Status of Terrestrial Mammals on Uninhabited Islands within the San Juan Archipelago, Washington. *Northwest Science*. 87:178-184
  10. **Kurle, CM**, Finkelstein, ME, Smith, KR, George, D, Ciani, D, Koch, PL, Smith, DR (2013) Stable nitrogen and carbon isotope discrimination factors for blood and feathers from California condor (*Gymnogyps californianus*) chicks and juveniles. *The Condor*. 115:1-9
  9. **Kurle CM** and Cardinale, BJ (2011) Ecological factors associated with the strength of trophic cascades in streams. *Oikos* 120:1897-1908
  8. **Kurle CM**, Sinclair ES, Edwards AE, and Gudmundson CJ (2011) Temporal and spatial variation in the stable nitrogen and carbon isotope ratios of common marine prey species from Alaskan waters. *Marine Biology* 158:2389-2404
  7. **Kurle CM** (2009) Interpreting temporal variation in omnivore foraging ecology via stable isotope modeling. *Functional Ecology* 23:733-744
  6. **Kurle CM**, Croll DA, and Tershy BT (2008) Introduced rats indirectly change marine intertidal communities from algae to invertebrate dominated. *Proceedings of the National Academy of Sciences* 105:3800-3804
  5. **Kurle CM** and Gudmundson CJ (2007) Regional differences in foraging of young-of-the-year Steller sea lions *Eumetopias jubatus* in Alaska: stable carbon and nitrogen isotope ratios in blood. *Marine Ecology Progress Series* 342:303-310
  4. Newsome SD, Etnier MA, **Kurle CM**, Waldbaur JR, Chamberlain CP, and Koch PL (2007) Historic decline in primary productivity in western Gulf of Alaska and eastern Bering Sea: Isotopic analysis of northern fur seal teeth. *Marine Ecology Progress Series* 332:211-224
  3. **Kurle CM** and Worthy GAJ (2002) Stable nitrogen and carbon isotope ratios in multiple tissues of the northern fur seal *Callorhinus ursinus*: implications for dietary and migratory reconstructions. *Marine Ecology Progress Series* 236:289-300
  2. **Kurle CM** (2002) Stable-isotope ratios of blood components from captive northern fur seals (*Callorhinus ursinus*) and their diet: applications for studying the foraging ecology of wild otariids. *Canadian Journal of Zoology* 80:902-909
  1. **Kurle CM** and Worthy GAJ (2001) Stable isotope assessment of temporal and geographic differences in feeding ecology of northern fur seals (*C. ursinus*) and their prey. *Oecologia* 126:254-265

### Popular Articles

1. **Kurle CM** (2016) The dangerous diet of coastal condors. *Biosphere*. 19:32-40

## Technical Reports

4. Finkelstein, M and **Kurle CM** (2014) Examining long-range transport of Montrose DDE via marine mammals: Evaluating risks to California condors. Final Report to the Montrose Settlements Restoration Program Trustee Council
3. **Kurle CM** (2006) Report on pre-assessment of intertidal sites on Unalaska Island, Alaska following the oil spill from the M/V Selendang Ayu. *in* J. Cubit, editor. Summary Report: M/V Selendang Ayu Oil Spill, Preassessment Surveys of Intertidal, Subtidal, and Anadromous Stream Habitats. NOAA Damage Assessment Center. Long Beach, California
2. **Kurle CM** (2005) Description of the rocky intertidal communities and Norway rat behavior on Rat Island, Alaska in 2003. U.S. Fish and Wildlife Service Report. AMNWR 05/23. Homer, Alaska
1. **Kurle CM** and Loughlin TR (2001) The use of fatty acid signature profiles to obtain dietary and other information from otariids. Steller Sea Lion Investigations, 2000. NOAA, NMFS, AFSC Processed Report 2001-05. Seattle, Washington

## Grants & Fellowships

2018	PI, MML/NMFS/NOAA grant for northern fur seal research (\$13,563)
2016-2019	PI, 2016 Alaska Pinniped Research Program, NOAA/NMFS Alaska Region (\$359,572) <i>Assessment of oceanographic and trophic causes of marine mammal declines in the North Pacific and Bering Sea using compound specific stable isotope analysis of archived northern fur seal teeth</i>
2016-2017	Frontiers of Innovation Scholars Program (FISP) (\$25,000) Parasitism, plastics, poisons, and seabird foraging ecology Co-PI with Ryan Hechinger, Scripps Institution of Oceanography, UCSD
2015-2016	PI, 2015 Alaska Pinniped Research Program, NOAA/NMFS Alaska Region (\$172,000) <i>Assessment of oceanographic and trophic causes of marine mammal declines in the North Pacific and Bering Sea using compound specific stable isotope analysis of archived northern fur seal teeth</i>
2015-2016	UC Mexus (\$14,500) <i>Ecology and conservation of two migratory endangered species</i> With Kurle student Cali Turner Tomaszewicz to support her PhD research
2015-2016	Frontiers of Innovation Scholars Program (FISP) (\$25,000), PI <i>Determining effects of long-term environmental variability on marine food webs and the status of endangered leatherback sea turtles</i> With Kurle student Elizabeth Hetherington to support her PhD research
2011-2015	US Department of the Interior, US Fish and Wildlife Service (\$79,578 and \$6,454) <i>Examining long-range transport of Montrose DDE via marine mammals: evaluating risks to California condors</i> Co-PI with Myra Finklestein, UC Santa Cruz
2011-2012	PI, Hellman Faculty Fellowship (\$41,212) <i>Determination of terrestrial, anthropogenic sources of nearshore pollution in coastal California using stable nitrogen and carbon isotope analysis</i>
2010-2011	PI, National Geographic Society Research and Exploration Grant (\$26,000)

*Effects of invasive mammals on marine birds and sub- and intertidal coastal ecosystems in the San Juan Islands, Washington*

- 2008-2009 Harvey L. Karp Discovery Award Post-doctoral Fellowship (\$50,000)  
*Effects of Species Diversity on the Biological Productivity of Food-webs*
- 2008 Travel Grant to attend the Isoscapes 2008 Meeting (\$400)
- 2007 Murray F. Buell Award travel grant to attend the ESA 42<sup>nd</sup> Annual Meeting (\$700)
- 2006 Strategic Environmental Research & Development Program (SERDP) Grant for attendance at the Ecological Society of America's 41<sup>st</sup> Annual Meeting (\$1000)
- 2005-6 Center for the Dynamics and Evolution of the Land-Sea Interface (CDELSI) Research and Travel Grants (\$500 and \$500)
- 2005 National Wildlife Refuge System Centennial Scholarship for Conservation Research (\$15,000) *Effects of an introduced species on a coastal ecosystem*
- 2005-2008 Environmental Protection Agency Science to Achieve Results (STAR) Fellowship (\$130,000) *Effects Of An Introduced Species On Marine Intertidal Trophic Interactions And Ecosystem Structure In The Aleutian Islands, Alaska*
- 2005 Sigma Delta Epsilon Adele Lewis Grant (\$3,000)
- 2005 UCSC Ecol. & Evol. Biology Department Summer Research Fellowship (\$500)
- 2005 The STEPS Institute for Innovation in Environmental Research M.R.C. Greenwood Research Grant in Biodiversity Conservation (\$9,000)
- 2005 Myers Oceanographic and Marine Biology Trust Grant for Research (\$2,300)
- 2005 UCSC Doctoral Student Teaching Assistant Sabbatical Fellowship (\$7,700)
- 2003-2004 United States Fish and Wildlife Service and Alaska Maritime National Wildlife Refuge Dissertation Research Grants (\$4,100 and \$5,000)
- 2003 Marilyn C. Davis Memorial Research Grant (\$2,000)
- 1998 Texas A&M University Graduate Program Enhancement Fund Research Grant (\$750)
- 1998 Marine Research Offshore Fishing Tournament Research Grant (\$500)
- 1997 National Marine Mammal Laboratory Field Research Grant (\$7,000)

**Research Presentations/Abstracts/Invited Seminars**

\*graduate or †undergraduate student or #post-doctoral author mentored by Kurle

79. **Kurle, CM**, Turner Tomaszewicz\*<sup>#</sup>, CN, McCarthy, MD, and Zeppelin, TK (2018) Reconstructing decades of food web structure in the North Pacific and Bering Sea using bulk and compound-specific stable isotope analyses from archived northern fur seal teeth. 11th IsoEcol Conference: Applications of Stable Isotope Techniques to Ecological Studies, Viña del Mar, Chile, August 2018
78. Turner Tomaszewicz, CN\*<sup>#</sup>, Peckham, H, Avens, L, Seminoff, JA, and **Kurle, CM** (2018) Long-term habitat use strategies of loggerheads and green turtles in the eastern North Pacific: Integrating multiple research tools helps predict fisheries impacts. International Sea Turtle Symposium. Kobe, Japan, February 2018
77. Hetherington, E\*, **Kurle, CM**, Seminoff, JA, Popp, BN, Dutton, PH (2018) Linking oceanographic conditions and stable isotope analyses to understand long-term trends in foraging ecology and demographics of a threatened turtle species. Ocean Sciences Meeting. Portland, OR, February 2018
76. Nehasil, S\*, Lowry, M, Jackson, AR, Holland, R, and **Kurle, CM** (2018) Linking prey availability to recent unusual mortality events of California sea lions. Ocean Sciences Meeting. Portland, OR, February 2018

75. Nguyen, H<sup>+</sup>, Nehasil, S, Lowry, M, Curtis, A, Govenar, K, and **Kurle, CM** (2018) The diet of California sea lions (*Zalophus californianus*) prior to recent unusual mortality events. Emerging Researchers National Conference in STEM. Washington DC, February 2018
74. Nguyen, H<sup>+</sup>, Lowry, M, Curtis, A, Nehasil, S, Govenar, K, and **Kurle, CM** (2017) The diet of California sea lions (*Zalophus californianus*) prior to recent unusual mortality events. Annual Biomedical Research Conference for Minority Students (ABRCMS). Phoenix, AZ, November 2017
73. **Kurle, CM** (2017 – *Invited Symposium, Nutritional Ecology in a Changing World*) The importance of animal foraging dynamics in shaping community ecology and population structure and informing conservation in the face of environmental challenges. 102nd Ecological Society of America Annual Meeting, August 2017
72. Turner Tomaszewicz, C<sup>\*,#</sup>, Seminoff, J, Peckham, SH, Avens, L, and **Kurle, CM** (2017) Utilizing samples from dead endangered species to protect future generations. 102nd Ecological Society of America Annual Meeting, August 2017
71. Hetherington, ED<sup>\*</sup>, Seminoff, JA, Dutton, PH, Popp, BN, and **Kurle, CM** (2017) Linking oceanography to long-term trends in foraging ecology and population demography of North Atlantic leatherback turtles. International Sea Turtle Symposium, Las Vegas, NV, April 2017
70. **Kurle, CM** (2017 - *Guest Lecture*) Applications of stable isotope analysis to conservation ecology for ANBI 146, Special Seminar series, Stable Isotopes in Diet and Ecology, Anthropology Dept., UCSD. February 2017.
69. **Kurle, CM** (2017 – *Invited Seminar*) Deciphering vertebrate foraging dynamics to better understand community ecology and inform conservation. Departamento de Biología de la Conservación, Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), Ensenada, Baja California, Mexico, January 2017
68. Güell, BA<sup>+</sup>, Zeppelin, TK, Ream, RR, and **Kurle, CM** (2017) Stomach contents and stable isotope values of whiskers reflect life history stages in northern fur seals. Society of Integrative and Comparative Biology, New Orleans, LA, January 2017
67. **Kurle, CM** (2017 – *Invited Public Seminar*) The dangerous diet of coastal condors. Nerd Nite at Liberty Station, San Diego, January 2017
66. Güell, BA<sup>+</sup>, Zeppelin, TK, Ream, RR, and **Kurle, CM** (2016) Stomach contents and stable isotope values of whiskers reflect life history stages in northern fur seals. Western Society of Naturalists, Monterey Bay, CA, November 2016
65. **Kurle, CM** (2016 – *Invited Seminar*) The importance of animal resource use in shaping community ecology and population structure and informing conservation. Biological Sciences Department Seminar Series, California Polytechnic State University, San Luis Obispo, November 2016
64. **Kurle, CM** (2016 – *Invited Seminar*) Deciphering vertebrate foraging dynamics to better understand community ecology and inform conservation. Ecology, Behavior, and Evolution Section Special Seminar, University of California San Diego, October 2016
63. **Kurle, CM** (2016 – *Invited Seminar*) Biogeochemical tools for marine conservation ecology: deciphering foraging ecology and movement patterns of vertebrates. San Diego State University Biology Department and Marine Ecology and Biology Student Association Seminar Series, October 2016
62. **Kurle, CM**, Richardson, KM<sup>\*</sup>, and Iverson, JB (2016) Marine derived nutrient subsidies drive gigantism of iguanas in the Bahamas. 10th IsoEcol Conference: Applications of Stable Isotope Techniques to Ecological Studies, Tokyo, Japan, April 2016
61. Hopkins, J<sup>#</sup>, Ferguson, JM, Tyers, D, and **Kurle, CM** (2016) A framework for testing competing stable isotope mixing models: a bear necessity. 10th IsoEcol Conference: Applications of Stable Isotope

- Techniques to Ecological Studies, Tokyo, Japan, April 2016
60. Hetherington, E\*, Seminoff, JA, Dutton, PH, Popp, BN, and **Kurle CM** (2016) Temporal variability in trophic and foraging ecology of North Atlantic leatherback turtles based on compound-specific isotope analysis of amino acids. 10th IsoEcol Conference: Applications of Stable Isotope Techniques to Ecological Studies, Tokyo, Japan, April 2016
59. Turner Tomaszewicz, C\*, Seminoff, J, Peckham, H, and **Kurle, CM** (2016) Multiple habitat use strategies of juvenile North Pacific loggerhead sea turtles (*Caretta caretta*) revealed in stable isotope patterns of sequential bone growth layers. 10th IsoEcol Conference: Applications of Stable Isotope Techniques to Ecological Studies, Tokyo, Japan, April 2016
58. Dannecker, D+\*, Goebel, M, and **Kurle, CM** (2015) Matching stable isotope values from vibrassae of newborn Antarctic fur seal (*Arctocephalus gazella*) pups and their mothers to better understand adult female foraging ecology and migration patterns. 21st Biennial Society for Marine Mammalogy, Conference on the Biology of Marine Mammals, San Francisco, CA, December 2015
57. Kelleher, C+\*, Zeppelin, T, Ream, R, and **Kurle, CM** (2015) Vibrassae growth rates and foraging and migration patterns for juvenile male northern fur seals (*Callorhinus ursinus*) from St. Paul Island, Alaska using stable isotope analysis. 21st Biennial Society for Marine Mammalogy, Conference on the Biology of Marine Mammals, San Francisco, CA, December 2015
56. **Kurle, CM** and McWhorter, J\* (2015) Spatial and temporal variation within fine-scale,  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$  isoscapes of the Southern California Bight: applications for reconstructing foraging ecology and migration patterns of marine vertebrates. 21st Biennial Society for Marine Mammalogy, Conference on the Biology of Marine Mammals, San Francisco, CA, December 2015
55. **Kurle, CM** (2015 - *Invited Symposium speaker*) Reconstructing animal foraging ecology and movement patterns with stable isotope analysis of archived samples. Symposium: Advanced Tools for Collection-based Mammalogy. American Society of Mammalogists, 95th Annual Meeting, Jacksonville, FL, June 2015
54. Kelleher, C+\*, Zeppelin, T, Ream, R, and **Kurle CM** (2015) Vibrassae growth rates and foraging and migration patterns for juvenile male northern fur seals (*Callorhinus ursinus*) from St. Paul Island, Alaska using stable isotope analysis. 7th Annual Biological Sciences Research Showcase 2015, UC San Diego, June 2015
53. Hopkins, JB III#, Koch, PL, Ferguson, JM, Kalinowski, ST, and **Kurle CM** (2015) Use of stable isotopes analysis in applied wildlife ecology. National Institute for Mathematical and Biological Synthesis (NIMBioS), University of Tennessee, Knoxville, TN. May 2015
52. Robison, L+, Hetherington, E\*, and **Kurle CM** (2015) Effects of environmental variability on trophic ecology of leatherback turtles (*Dermochelys coriacea*) in the North Atlantic. UCSD ESYS Research Symposium, May, 2015.
51. **Kurle, CM** (2015 - *Invited Seminar*) Biogeochemical tools for marine conservation ecology: deciphering niche partitioning, foraging ecology, and movement patterns of vertebrates. Marine Biology Seminar Series, Scripps Institution of Oceanography, UCSD, April 2015.
50. **Kurle, CM** (2015 - *Invited Seminar*) Vertebrate foraging ecology and its importance for applied conservation research. Ecology Seminar Series, Howard University, Washington DC, February 2015.
49. Marroquin-Flores, R+, Turner Tomaszewicz, C\*, Seminoff, J, Peckham, H, Avens, L, and **Kurle, CM** (2014) Determining age and body size distribution of endangered North Pacific loggerhead turtles (*Caretta caretta*) and East Pacific green turtles (*Chelonia mydas*) at an East Pacific bycatch hotspot. 2014 University of New Mexico McNair Scholars Research Conference, Albuquerque, NM, October 2014.



48. Marroquin-Flores, R<sup>+</sup>, Turner Tomaszewicz, C\*, Seminoff, J, Peckham, H, Avens, L, and **Kurle, CM** (2014) Determining age and body size distribution of endangered North Pacific loggerhead turtles (*Caretta caretta*) and East Pacific green turtles (*Chelonia mydas*) at an East Pacific bycatch hotspot. Society Advancing Hispanics/Chicanos and Native Americans in Science (SACNAS), Los Angeles, CA, October 2014.
47. Turner-Tomaszewicz, C\* and **Kurle, CM** (2014) Endangered Species Ecology: Determining habitat-use duration of endangered loggerhead turtles (*Caretta caretta*) in a bycatch hotspot using skeletochronology and stable isotope analysis. UCSD Division of Biological Sciences Retreat. Lake Arrowhead, CA, September 2014.
46. **Kurle, CM** and McWhorter, J\*(2014) Spatial and temporal variation within fine-scale,  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$  isoscapes of the Southern California Bight. UCSD Division of Biological Sciences Retreat. Lake Arrowhead, CA, September 2014.
45. Turner Tomaszewicz, C\*, Seminoff, J, Avens, L, Peckham, H, and **Kurle, CM** (2014) Life history patterns and habitat use of two species of endangered marine turtles near a bycatch hotspot area in the East Pacific using skeletochronology and stable isotope analysis. Scripps Institution of Oceanography, Student Symposium, La Jolla, CA, September 16, 2014.
44. **Kurle CM**, Finkelstein ME, Bakker, V, Wolstenholme, R, Burnett, J, Brandt, J and Smith, DR (2014) Marine-derived contamination in the diets of California Condors: combining toxicology and stable isotope analysis. 9th IsoEcol Conference: Applications of Stable Isotope Techniques to Ecological Studies, Perth, Australia, August 2014
43. **Kurle, CM** and McWhorter, J\* (2014) Spatial and temporal variation within a fine-scale,  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$  isoscape of the Southern California Bight. 9th IsoEcol Conference: Applications of Stable Isotope Techniques to Ecological Studies, Perth, Australia, August 2014
42. McWhorter, J\* and **Kurle, CM** (2014) Creation of a stable carbon and nitrogen isotope map, or "isoscape," of the Pacific Ocean off the coast of California for the conservation of marine vertebrates. Society for Conservation GIS. Pacific Grove, CA. July, 2014
41. Bobar, M<sup>+</sup> and **Kurle, CM** (2014) Evidence for consumption of krill in pre-breeding Antarctic fur seals (*Arctocephalus gazella*). Senior Thesis Abstract for the Saltman Quarterly, 11
40. Shakya, A<sup>+</sup>, Turner-Tomaszewicz, C\*, Seminoff, J, and **Kurle, CM** (2014) Collagen isolation techniques and tissue-diet discrimination values of green sea turtles. UCSD ESYS Research Symposium, May, 2014.
39. McWhorter, J\*, Semmens, B, Goericke, R, Batchelor, H, and **Kurle, CM** (2014) Creation of a stable carbon and nitrogen isotope map, or isoscape, of the Pacific Ocean off the coast of California. 12th Annual Headwaters to Ocean (H2O) Conference, May 2014, San Diego, CA. Presentation of Jennifer's SIO MS capstone research conducted in my lab.
38. Tomaszewicz, C\*, Seminoff, J, Avens, L, Peckham, H, Goshe, LR, Bickerman, K, de la Toba, V, Rogdriguez-Baron, JM, and **Kurle, CM** (2014) Habitat use of North Pacific Loggerhead turtles (*Caretta caretta*) and duration spent in a high-bycatch area near Baja California Peninsula using skeletochronology and stable isotope analysis. ISTS (International Sea Turtle Society) Annual Meeting, New Orleans, LA. NOTE: CT won the Best Student Presentation Award for this talk.
37. Tomaszewicz, C\*, Ramirez, MD, Seminoff, J, Avens, L, Shakya, A<sup>+</sup>, McCartha, M<sup>+</sup>, Heppell, S, and **Kurle, CM** (2014) Investigation of alternate techniques for stable isotope analysis of sea turtle bone collagen. ISTS (International Sea Turtle Society) Annual Meeting, New Orleans, LA
36. **Kurle, CM** (2014 - *Invited Seminar*) Vertebrate foraging ecology and its importance for conservation research. Invited speaker for In the Lab, the UCSD Staff Learn at Lunch Lecture Series
35. Turner Tomaszewicz, C\*, Seminoff, J, Avens, L, Peckham, H, and **Kurle, CM** (2014) Tracking habitat

use and life history patterns of loggerhead turtles in the north Pacific using skeletochronology and stable isotope analysis. ASLO Meeting, Hawaii

34. **Kurle, CM** (2014 - *Invited Seminar*) 28 years in the making: Darwin's observations and his contribution to the theory of evolution by natural selection. Invited faculty speaker for the UCSD Darwin Day Celebration
33. Steinitz, R<sup>+</sup>\*, Pasachnik, S, and **Kurle, CM** (2013) The Use of Stable Isotope Analysis to Decipher Trophic Niches of Sympatric Wild Rock Iguanas (*Cyclura* spp.) in the Dominican Republic. 2013 IUCN Iguana Specialist Group Meeting. Jamaica. November 2013
32. Richardson, K<sup>+</sup>\*, Iverson, J, and **Kurle, CM** (2013) Determining variations in foraging ecology among populations of the Allen Cays Rock Iguana (*Cyclura Cychlura inornata*): a stable isotope approach. 2013 IUCN Iguana Specialist Group Meeting. Jamaica. November 2013
31. **Kurle, CM** (2013 - *Invited Seminar*) Applications of stable isotope biogeochemistry in marine biology. Perspectives on Ocean Sciences: SIO Seminar Series for undergraduate Marine Biology majors. UCSD, La Jolla, CA
30. McCartha, M<sup>+</sup>, Turner-Tomaszewicz, C\*, **Kurle, CM**, and Seminoff, J (2013) Developing techniques for isolating collagen in sea turtle bones for stable isotope analysis of  $\delta^{13}\text{C}$ . Scripps Undergraduate Research Fellow Summer Symposium, Scripps Institution of Oceanography, La Jolla, CA
29. **Kurle, CM** (2013 - *Invited Seminar*) Applications of stable isotope biogeochemistry to marine ecology research. Interdisciplinary Training Program in Marine Biodiversity and Conservation, Scripps Institution of Oceanography, La Jolla, CA
28. Turner-Tomaszewicz, C\*, **Kurle, CM**, et al. (2013) Tracking habitat use and life history patterns of east Pacific green turtles (*Chelonia mydas*) using stable isotope analysis with skeletochronology. Internat'l Sea Turtle Society, 33rd Annual Meeting, Baltimore, MD
27. **Kurle, CM** (2013 - *Invited Seminar*) Moving beyond "you are what you eat:" Broader applications of stable isotope biogeochemistry to ecological questions, Hugh Hanson Ecology and Evolution Seminar Series, Arizona State University, School of Life Sciences
26. **Kurle, CM** (2012) The role of marine-derived contamination in the diets of California condors: combining toxicology with stable isotope analysis, UCSD Biology/Salk Retreat, Lake Arrowhead, CA
25. Crawford, TG\*, Gerber, L, and **Kurle, CM** (2012) Intracolony niche partitioning among California sea lions in the Gulf of California, Mexico. Ecological Society of America, Portland, OR
24. **Kurle, CM**, Finkelstein, M, et al. (2012) The role of marine-derived contamination in the diets of California condors: combining toxicology with stable isotope analysis. Ecological Society of America, Portland, OR
23. Crawford, TG\*, Gerber, L, and **Kurle, CM** (2012) Context matters: Intrapopulation niche partitioning among California sea lions in the Gulf of California. Society for Conservation Biology, Oakland, CA
22. Finkelstein, M, **Kurle, CM**, et al. (2012) Can California Condors survive in a polluted world? The role of terrestrial and marine contamination on an endangered bird's recovery. Society for Conservation Biology, Oakland, CA
21. **Kurle, CM** (2012 - *Invited seminar*) Determining foraging ecology and movement patterns of wild animals using stable isotope analysis. CSU Long Beach, CA
20. **Kurle, CM** (2012 - *Invited seminar*) Stable isotope analysis in marine systems: Tracking vertebrate foraging ecology and movement patterns using biogeochemistry. Scripps Institution of Oceanography, La Jolla, CA
19. Turner-Tomaszewicz, C\*, **Kurle, CM**, et al. (2012) Detecting ontogenetic shifts and elucidating

- the “lost years” of East Pacific Green Turtles (*Chelonia mydas*) using stable isotope analysis with skeletochronology. XIV Annual Mtg of the Group Tortuguero, La Paz, BCS
18. Turner-Tomaszewicz, C\*, **Kurle, CM**, et al. (2012) Detecting ontogenetic shifts and elucidating the “lost years” of East Pacific Green Turtles (*Chelonia mydas*) using stable isotope analysis with skeletochronology. International Sea Turtle Society, 32nd Annual Meeting, Huatulco, Mexico
  17. **Kurle CM**, Finkelstein, M, et al. (August 2012) The role of marine-derived contamination in the diets of California condors: combining toxicology with stable isotope analysis. Ecological Society of America Conference, Portland, OR
  16. **Kurle, CM** (2010) The use of stable isotopes to assess foraging ecology of animals. Guest Lecture, University of California, San Diego, CA
  15. **Kurle, CM** (2010) The role of trophic cascades in shaping community structure. Seminar, Biological Sciences Division, EBE Section, University of California, San Diego, CA
  14. **Kurle, CM** (2009) Trophic cascades decline with increasing algal diversity in streams. 44th Annual Meeting for the Ecological Society of America, Albuquerque, NM
  13. **Kurle, CM** (2008 – *Invited Seminar*) The alteration of food-webs via human perturbations, University of California, San Diego, CA
  12. **Kurle, CM** (2008 – *Invited Seminar*) Trophic impacts of invasive animals, University of California, San Diego, CA
  11. **Kurle, CM** (2008 – *Invited Seminar*) Investigating trophic impacts of invasive rats on islands, University of California, Santa Barbara, CA
  10. **Kurle, CM** (2008) Modeling temporal variation in the diet of an invasive omnivore using stable isotopes of nitrogen and carbon. Isoscapes 2008, Santa Barbara, CA
  9. **Kurle, CM**, Croll DA, Tershy BT (2007) Estimating impacts of invasive rats using analysis of stable isotopes from captive and field studies. 42nd Annual Meeting for the Ecological Society of America, San Jose, CA
  8. **Kurle, CM** (2006 – *Invited Seminar*) Ecological extinctions and trophic interactions. Pacific Lutheran University, Tacoma, WA
  7. **Kurle, CM** (2006) Introduced rats indirectly change intertidal communities from algae to invertebrate dominated. Environmental Protection Agency Graduate Fellowship Conference, Washington, DC
  6. **Kurle, CM** (2006) The role of stable carbon and nitrogen isotopes in determining a trophic cascade whereby invasive rats indirectly transform marine intertidal communities. 5th International Conference on Applications of Stable Isotope Techniques to Ecological Studies, Belfast, N. Ireland
  5. **Kurle, CM** (2006) Introduced rats indirectly alter marine communities. 41st Annual Meeting for the Ecological Society of America, Memphis, TN
  4. **Kurle, CM** (2006) Introduced rats indirectly transform island intertidal communities. 20th Annual Meeting for The Society for Conservation Biology, San Jose, CA
  3. **Kurle, CM** (2005) Effects of an introduced terrestrial predator on rocky intertidal and marine bird communities in the Aleutian Islands, Alaska. 3rd Annual UCSC/Stanford University Species Interaction Workshop, Palo Alto, CA
  2. **Kurle, CM** and Sinclair, ES (2003) Estimation of Steller sea lion (*Eumetopias jubatus*) foraging ecology using stable nitrogen and carbon isotope ratio analyses of blood components. 15th Biennial Meeting for The Society for Marine Mammalogy, Greensboro, NC
  1. **Kurle, CM** (1999) Stable isotope assessment of temporal and geographic differences in feeding

ecology of northern fur seals (*Callorhinus ursinus*) and their prey. 13th Biennial Meeting for The Society for Marine Mammalogy, Maui, HI

### **Professional Service, Training, and Community Outreach**

36. Academic Integrity Office, Review Board, Faculty Member, UCSD (2018-present)
35. Pathways in Biological Sciences Training Program, NIH, PI and Advisory Committee, UCSD (2018-present)
34. Faculty Mentor for Katherine Petrie, Lecturer, UCSD (2018-19)
33. Invited participant for Communicating with Policy-Makers Workshop at UCSD (2018)
32. Invited participant for Media-Message Training Workshop at UCSD (2018)
31. Divisional Retreat Planning Committee, UCSD Division of Biological Sciences (2017-present)
30. BS/MS Program Committee, UCSD Division of Biological Sciences (2017-present)
29. Graduate Student Grants Coordinator, Ecology, Behavior, and Evolution Section (2017-present)
28. Editor, UCSD Saltman Quarterly Undergraduate Research Journal Faculty Advisory Board (2017-present)
27. Alternate Representative, Biological Sciences, Representative Assembly, UCSD Academic Senate (2017-2018)
26. Faculty Search Committee, Ecology, Behavior and Evolution Section (2017-2018)
25. Public talk on California condor research for San Diego Nerd Nite (2017)
24. Cell and Molecular Genetics (CMG) Training Grant Advisory Committee, UCSD (2016 - 2018)
23. Faculty mentor for Levi Lewis, BILD 3 Associate-In Lecturer, UCSD (2016)
22. Faculty Search Committee, Ecology, Behavior and Evolution Section (2015-2016)
21. Member, Center for Microbiome Innovation, UCSD (2015 - present)
20. Graduate Admissions Committee, UCSD Division of Biological Sciences (2015 - 2017)
19. Executive Committee Member (elected), John Muir College, UC San Diego (2015-present)
18. Invited Panelist for the Associated Students Women's Commission Women in Leadership Panel, showcasing female role models at UCSD (May 2015)
17. Member of the Science Team for condorwatch.org, a website designed to employ citizen scientists to analyze foraging and behavior of California condors from trip-camera photographs to assess their potential for lead poisoning (2014 - present)
16. Faculty Mentor for the UCSD/Howard University Partnership for Student Success program that hosts and mentors African American/Black undergraduates in science labs for the summer to promote diversity in STEM graduate studies on UC campuses (2014, 2015)
15. Faculty Mentor for the Scripps Institution of Oceanography Research Experiences for Undergraduates program that hosts and mentors under-represented minorities in science labs for the summer (2012, 2013, 2014)
14. Faculty Mentor for Dr. Maxi Richmond, BILD 3 Lecturer, UCSD (2014)
13. Faculty Mentor for Dr. Keefe Reuther, BILD 3 Unit 18 Lecturer, UCSD (2013)
12. Faculty Workgroup to develop a course to improve graduate student communication skills, UCSD, Division of Biological Sciences (2013)
11. Muir College Environmental Grants Committee, UCSD (2013)
10. Associate Editor, *Methods in Ecology and Evolution* (2013 - present)
9. National Science Foundation Antarctic Organisms and Ecosystems Review Panel (July 2013)
8. Advisor and liaison between UCSD and The Science Exchange, and undergraduate field ecology studies program (2011 - present)

7. Graduate Recruitment Committee, UCSD Division of Biological Sciences (2011 - 2015)
6. Faculty Search Committee, Ecology, Behavior and Evolution Section (2011 - 2012)
5. Environmental Outreach Education Installation created for the UCSC Arboretum and STEPS Institute for Innovation in Environmental Research (2007)
4. Scientific Advisory Committee Member, Society for Marine Mammalogy (2002 - 2005)
3. Student Member-at-Large, Board of Governors, Society for Marine Mammalogy (2002 - 2004)
2. Member of the Ecological Society of America, American Society of Mammalogists, and the Society for Conservation Biology
1. Reviewer of Proposals for Australian Antarctic Science Program, National Fish and Wildlife Federation, National Geographic Society, National Science Foundation, North Pacific Research Board, and Texas SeaGrant, and papers for Aquatic Mammals, Canadian Journal of Zoology, The Condor, Ecology, Ecological Applications, Ecosphere, Endangered Species Research, Fisheries Oceanography, Functional Ecology, Journal of Animal Ecology, Journal of Mammalogy, Marine Biology, Marine Ecology Progress Series, Marine Mammal Science, Methods in Ecology and Evolution, Oikos, Physiological and Biochemical Zoology, PLOS One, Polar Biology, Rapid Communications in Mass Spectrometry, and Wildlife Research

### **Postdoctoral Researchers**

3. Callandra Turner Tomaszewicz (2016-2018)
2. John (Jack) Hopkins III (2015-2016)
1. Joseph Bowden (2014-2015)

### **Graduate Students**

15. Kelly Flanders (Ph.D.), 2018-present
14. Brenna Groom (M.Sc.), 2017 - 2018
13. Shreya Banerjee (M.Sc.), 2016 - 2017
12. Stephanie Nehasil (Ph.D.), 2016 - present
11. Andrea Liu (M.Sc.), 2016 - 2017
10. Tanner Howard (M.Sc.), 2016 - 2018
9. Christina Kelleher (M.Sc.), 2014 - 2016
8. Jennifer McWhorter (MAS/MBC), 2013 - 2014
7. Elizabeth Hetherington (Ph.D.), 2013 - 2018
6. David Dannecker (M.Sc.), 2013 - 2016
5. Kristen Richardson (M.Sc.), 2013 - 2015
4. Ronnie Steinitz (M.Sc.), 2013 - 2015
3. Victoria Hanna (M.Sc.), 2012 - 2014
2. Callandra Turner Tomaszewicz (Ph.D.), 2011-2016
1. Athena Lam (Ph.D.), 2010 - 2011

### **Current and Past Undergraduate Students and Volunteers Conducting Research with the Kurle Lab**

48. Kara Reynolds – Dietary niche partitioning in hawksbill sea turtles in the Sea of Cortez
47. Cameron Clay – Foraging ecology of California sea lions
46. Alexander Fortner – Bioengineering/EBE UCSD 199 research. Climate change effects on sand

- temperature and sea turtle embryo development in Jalisco, Mexico in collaboration with the Science Exchange
45. Joyce Qiao – ESYS Advisor. Riparian habitat restoration for western pond turtles in collaboration with USFWS
  44. Hanh Nguyen – UCSD LEEDs fellow, dietary patterns in California sea lions.
  43. Ziyi (Iris) Wang – Determining dietary niches (mammalian vs. reptilian prey) of rattlesnakes in two desert environments in the American Southwest in collaboration with Dr. Rulon Clark at San Diego State University
  42. Brenna Groom – Methodological experiments to improve stable isotope analysis of bone
  41. Stella Yuan – ESYS Advisor. Flying squirrel ecology in collaboration with the USFWS.
  40. Fei (Sophia) Su – Academic Internship Faculty Advisor. DNA repair mechanisms in cancer development in collaboration with Dr. Wu at The Scripps Institute
  39. James Bengé - Molecular genetics studies in green and leatherback sea turtles in collaboration with NOAA's SWFSC
  38. Tanner Howard - Effects of environmental variability on bottom up control of marine food webs
  37. Shreya Banerjee - Quantifying individual size differences in leatherback sea turtle clutches
  36. Ponteah Pirouzan - Academic Internship Program Faculty Advisor. Physiological research, mammalian teeth
  35. Brandon Guell - Determining weaning age of northern fur seal pups in the Pribilof Islands, AK from stomach contents and stable isotope analysis
  34. Celeste Medina-Ontiveros - Survey of spider diversity in the Canadian Arctic in collaboration with Dr. Joseph Bowden at Aarhus University, Denmark
  33. Jalyse Cuff - A fellow with the UC-Historically Black Colleges and Universities Initiative and specifically with the UCSD/Howard University Partnership for Student Success Program, a faculty-student mentorship program funded by a grant by the UC Office of the President to improve the representation of African American/Black students in STEM graduate programs on UC campuses. -Zooplankton and sea turtle research related to reconstructing oceanographic patterns in the eastern Pacific Ocean using stable isotope analysis.
  32. Michelle Yasutake - Human impacts in the rocky intertidal at the Cabrillo National Monument, Environmental Systems Internship mentor
  31. Gillian McDivitt - Preparation of iguana tissues and prey material for deciphering iguana niche partitioning in the Dominican Republic.
  30. Lisa Robison - Sorting, identifying, and choosing zooplankton samples for bulk and compound specific stable isotope analysis for deciphering long-term oceanographic trends in the Pacific Ocean. ESYS intern.
  29. Andrea Liu - Organization of oceanographic data over time from the Pacific and Atlantic Ocean, preparation of marine samples for stable isotope analysis.
  28. Rosario Marroquin Flores (Scripps Institution of Oceanography Undergraduate Research Fellow) - Sectioning sea turtle bones for extraction of organic material for stable isotope analysis.
  27. Erin Manaigo - A fellow with the UC-Historically Black Colleges and Universities Initiative and the UCSD/Howard University Partnership for Student Success Program, a faculty-student mentorship program funded by a grant by the UC Office of the President to improve the representation of African American/Black students in STEM graduate programs on UC campuses. Aspects of field and laboratory research related to plant invasions in California ecosystems and the use of stable isotope analysis in reptile trophic niche partitioning.
  26. Kirsten Bates - Stable isotope discrimination factors in wolf species, an Environmental Systems

- mentorship in collaboration with the Wolf Center in Julian, CA. Kirsten's work is in preparation for a 1st authored manuscript in Journal of Mammalogy
25. Marcus Bobar - Aspects of fatty acid and stable isotope analysis of Antarctic fur seals in collaboration with Dr. Mike Goebel at NOAA's SWFSC in La Jolla, CA
  24. David Dannecker - Preparation of animal and plant tissues for stable isotope analysis, tracing Antarctic fur seal mother-pup pair foraging ecology using stable isotope analysis of whiskers.
  23. Tricia Mae Caraig (Scripps Institution of Oceanography Undergraduate Research Fellow) - Refining techniques for and preparing plankton and sediment samples for stable isotope analysis
  22. Kristina Cary - Analysis of camera trap data in closed and open parks in San Diego County, an Environmental Systems mentorship in collaboration with San Diego County
  21. Ashley Cunningham - Stable isotope analysis of Seychelles hawksbills turtles, an Environmental Systems mentorship in collaboration with Dr. Jeff Seminoff at NOAA's SWFSC in La Jolla, CA
  20. Kristen Richardson – Trophic causes of gigantism in Bahamian Cay iguanas in collaboration with Dr. John Iverson at Earlham College
  19. Ronnie Steinitz – Niche partitioning in iguanas on the Dominican Republic and discrimination factors of captive iguanas in collaboration with the San Diego Zoo Conservation Unit
  18. Wendy Rogers - Using archived wildlife rescue data to determine patterns of diversity in San Diego County, an Environmental Systems mentorship in collaboration with Project Wildlife
  17. Shanean Ludwar - Survey of spider diversity in the Canadian Arctic in collaboration with Dr. Joseph Bowden at Aarhus University, Denmark
  16. Kim Narel - Foraging ecology and movement patterns of mother-pup pairs of northern fur seals on the Channel Islands, California in collaboration with NOAA's NMML in Seattle, WA
  15. Christina Kelleher - Foraging ecology and movement patterns of juvenile male northern fur seals on the Pribilof Islands, AK with NOAA's NMML in Seattle, WA
  14. Michelle McCartha (Scripps Institution of Oceanography Undergraduate Research Fellow) - Testing methods for removing organic matter from sea turtle bones for stable isotope analysis. Michelle is a co-author on two posters presented from our lab at conferences and will be a co-author on the publication from this work.
  13. Lauren Hughes - Monitoring urban run-off into the Kendall Frost Mission Bay Reserve, an Environmental Systems mentorship in collaboration with Isabel Kay
  12. Annika Nabors - Testing methods and preparing shells for stable isotope analysis
  11. Christina Souto - Behavioral aspects of captive wolves, an Environmental Systems mentorship in collaboration with the Wolf Center in Julian, CA
  10. Anjali Shakya - Refining aspects of removing organic matter from sea turtle bones and analyzing it for stable isotopes, an Environmental Systems internship
  9. Carly Lindley - Clean water monitoring in coastal and dry weather environments, Environmental Systems mentorship in collaboration with the Clean Water Program for the City of Encinitas
  8. Ida Ariana McShayne-Ananda - Wild bat foraging ecology in Baja in collaboration with Dr. Winnifred Frick at UC Santa Cruz
  7. Kira James - Preparation of animal, plankton, and sediment samples for stable isotope analysis. Kira is an author on our wolf isotope discrimination factors manuscript.
  6. Emily Parng - Stable isotope discrimination factors in Felid species. Emily's work was published as a 1st authored manuscript in the Journal of Mammalogy (2014)
  5. Leah Winstead - A review of differential reproductive success in captive Rhinoceros, a collaboration with the San Diego Zoo
  4. George LaPole - Preparing rat bones for stable isotope analysis

3. Rohan Mehta - Modeling wild rat diets in R.
2. Tammy Wilson - Participation in a long-term sea turtle monitoring program in Costa Rica in collaboration with The Science Exchange Summer Program and mentor for 199 project in collaboration with NOAA's SWFSC
1. Nicholas Duffield - California sea lions and California condor foraging ecology

**Current and Past Graduate Student Advisory Committees**

38. Angela Scesciorka (Ph.D.) Scripps Inst. of Oceanography
37. Julie Barrios (M.Sc.) Scripps Inst. of Oceanography
36. Caroline IacuanIELLO (M.Sc.) Scripps Inst. of Oceanography/EBE
35. Beverly French (Ph.D.) Scripps Inst. of Oceanography
34. Leticia Cavole (Ph.D.) Scripps Inst. of Oceanography
33. Alejandra Arroyave (Ph.D.) Chemistry and Biochemistry
32. Jillian Schat (M.Sc.) EBE
31. Isabel Hermsmeyer (M.Sc.) EBE and Anthropology
30. May Linn Paulsen (Ph.D.) Scripps Inst. of Oceanography
29. Elizabeth Bullard (Ph.D.) EBE
28. Dionne Mejia (M.Sc.) EBE
27. Ellie Reece (M.Sc.) EBE
26. Chandler Purity (Ph.D.) EBE
25. Alberto Vasquez (M.Sc.) EBE
24. Josh Stewart (Ph.D.) Scripps Inst. of Oceanography
23. Trevor Joyce (Ph.D.) Scripps Inst. of Oceanography
22. Marika Schulhof (Ph.D.) EBE
21. Romy Boiskin (M.Sc.) EBE
20. Molly Gleason (M.Sc.) Scripps Inst. of Oceanography
19. Samantha Clements (M.Sc.) Scripps Inst. of Oceanography
18. Brittany Idrizaj (M.Sc.) Scripps Inst. of Oceanography
17. Douglas Krause (Ph.D.) Scripps Inst. of Oceanography
16. Cristiane Palaretti Bernardo (M.Sc.) Scripps Inst. of Oceanography
15. Celia Symons (Ph.D.) EBE
14. Amanda Carter (M.Sc.) Scripps Inst. of Oceanography
13. Melanie Beasley (Ph.D.) Anthropology
12. Amanda Barker (M.Sc.) Scripps Inst. of Oceanography
11. Ellsworth Campbell (M.Sc.) EBE
10. Chris Sullivan (M.Sc.) EBE
9. Tara Crawford (M.Sc.) Arizona State University
8. David Nguyen (M.Sc.) EBE
7. Douglas Hooten (M.Sc.) EBE
6. Andrew Somerville (Ph.D.) Anthropology
5. Hiroto Kemeyama (M.Sc.) EBE
4. Elisabeth Gibson Cordner (M.Sc.) Scripps Inst. of Oceanography
3. Matthew Forrest (Ph.D.) Scripps Inst. of Oceanography
2. Giovanni Hanna (M.Sc.) EBE
1. Annie Peng (M.Sc.) EBE



## **Other Media & Popular Articles Featuring Dr. Kurle's Research**

### **Media featuring Dr. Kurle's work on invasive rats on islands**

- 2008 BBC radio interview: Drive on Five Live, "Rats on the Aleutian Islands," February 26, 2008
- 2008 BBC radio interview: The World Today, "Effects of rats on islands," February 26, 2008
- 2008 BBC radio interview: The Richard Bacon Show, "Rats on islands," February 26, 2008
- 2008 National Geographic News:  
<http://news.nationalgeographic.com/news/2008/02/photogalleries/rat-pictures/photo5.html>)
- 2008 Live Science on MSNBC: <http://www.msnbc.msn.com/id/23341699/>
- 2008 Biology News Net:  
[http://www.biologynews.net/archives/2008/02/25/rats\\_on\\_islands\\_disrupt\\_ecosystems\\_from\\_land\\_to\\_sea\\_researchers\\_find.html](http://www.biologynews.net/archives/2008/02/25/rats_on_islands_disrupt_ecosystems_from_land_to_sea_researchers_find.html))
- 2008 UPI:  
[www.upi.com/NewsTrack/Science/2008/02/26/study\\_island\\_rats\\_harm\\_ecosystems/8838/](http://www.upi.com/NewsTrack/Science/2008/02/26/study_island_rats_harm_ecosystems/8838/)
- 2008 Moments in Time World Press: <http://timeinmoments.wordpress.com/2008/02/27/islands-with-rats-lose-their-birds/>
- 2008 Christian Science Monitor: <http://www.csmonitor.com/2008/0228/p17s01-stgn.html>
- 2008 Science Daily News: <http://www.sciencedaily.com/releases/2008/02/080225213745.htm>
- 2008 Plenty Magazine:  
[http://www.plentymag.com/features/2008/04/eliminating\\_invasive\\_rats.php](http://www.plentymag.com/features/2008/04/eliminating_invasive_rats.php)

### **Media featuring Dr. Kurle's work with California condors**

- 2014 BirdWatchingDaily.com, New website lets citizen scientists monitor condors, April 15, 2014,  
<http://www.birdwatchingdaily.com/blog/2014/04/15/new-website-lets-citizen-scientists-monitor-condors/>
- 2014 Condor Watch, Zooinverse Blog, Meet the Science Team: Carolyn Kurle, August 6, 2014,  
<http://blog.condorwatch.org/2014/08/06/meet-the-science-team-carolyn-kurle/>

### **Media featuring Dr. Kurle's research on bears in Yosemite and rats on the Aleutian Islands**

- 2015 Science Daily: <http://www.sciencedaily.com/releases/2015/08/150824130450.htm>
- 2015 Newspaper Post: <http://www.newspaperpost.com/2015/08/24/study-finds-yosemite-black-bears-prefer-nuts-and-berries-to-humans/>
- 2015 Science Newsline, Biology: <http://www.sciencenewsline.com/articles/2015082423450051.html>
- 2015 Examiner: <http://www.examiner.com/article/study-finds-yosemite-black-bears-prefer-nuts-and-berries-to-humans>
- 2015 Phys.org: <http://phys.org/news/2015-08-black-yosemite-forage-primarily-nuts.html>
- 2015 Steam Register: <http://steamregister.com/yosemites-black-bears-forage-primarily-on-plants-and-nuts/>
- 2015 Laboratory Equipment, Image of the Week:  
<http://www.laboratoryequipment.com/news/2015/08/image-week-black-bears-yosemite-live-plants-nuts>
- 2015 The Wildlife Society: <http://wildlife.org/what-do-yosemite-bears-and-aleutian-rats-have-in-common/>

- 2015 AwwNews.com: <http://www.awwnews.com/science/yosemite-bears-ursus-americanus-00158.html>
- 2015 Global News Connect: <http://globalnewsconnect.com/study-finds-black-bears-in-yosemite-forage-primarily-on-plants-and-nuts/>

**Media featuring Dr. Kurle’s research on contamination in California condors in coastal California**

- 2016 KPBS Midday Edition: California Condors Face New Threat: <http://www.kpbs.org/news/2016/aug/08/california-condors-threatened-contaminated-sea-lion/>
- 2016 KPCC Take Two: <http://www.scpr.org/programs/take-two/2016/08/09/51139/new-research-reveals-what-s-threatening-the-califo/>
- 2016 Popular Science: <http://www.popsci.com/contaminated-mammals-pose-threat-to-condor-success-story>
- 2016 Smithsonian: <http://www.smithsonianmag.com/ist/?next=/science-nature/mercury-laden-sea-lion-carcasses-are-trouble-californias-coastal-condors-180960043/>
- 2016 WIRED: <http://www.wired.com/2016/08/troubling-snap-comeback-california-condor/>
- 2016 San Diego Union Tribune: <http://www.sandiegouniontribune.com/news/2016/aug/09/california-condor-pesticide-contamination-big-sur/>
- 2016 Biosphere: <http://carolynkurle.com/papers/Kurle%202016%20Biosphere%20Article%20on%20Condors.pdf>
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