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EDUCATION

Ph.D	Oceanography. Scripps Institution of Oceanography, University of California	2011
M.S.	Marine Biology. Scripps Institution of Oceanography, University of California	2011
B.A.	Marine Biology. University of California at Santa Cruz	2003
B.S.	Molecular, Cellular and Developmental Biology. University of California at Santa Cruz	2003
	Chemical Engineering. Universidad Nacional de Tucumán, Argentina	1998-2001

PROFESSIONAL EXPERIENCE

National Institute of Water and Atmospheric Research (NIWA) <i>Scientist.</i>	2017-present
National Institute of Water and Atmospheric Research (NIWA) <i>Post-doctoral Fellow.</i>	2015-2017
Scripps Institution of Oceanography, University of California <i>Post-doctoral Research Fellow.</i>	2012-2015
Scripps Institution of Oceanography, University of California <i>Research Assistant</i>	2010-2011
Scripps Institution of Oceanography, University of California <i>Teaching Assistant</i>	2008
Scripps Institution of Oceanography, University of California <i>Research Assistant</i>	2005-2007

PUBLICATIONS

In prep

- Décima, M.**, A. Gutiérrez-Rodríguez, K. Safi, and M. Pinkerton. In prep. Plankton food web structure and trophic flows in the Chatham Rise.
- Décima, M.**, A. Gutiérrez-Rodríguez, M. R. Stukel, and S. Nodder. In prep. Export fluxes and zooplankton processes in subtropical waters northeast of New Zealand
- Cayson, Connor P., J. C. Prairie, and **M. Décima**. In prep. The effects of density gradients on the distribution and behavior of copepods.

- d) **Décima, M.** and M. R. Landry. In prep. Zooplankton food-web responses to an eddy disturbance in subtropical waters.
- e) **Décima, M.** In prep. In prep. DNA metabarcoding of salp gut contents illuminates prey preferences and feeding depths of *S. thompsoni* in the Ross Sea region.

Submitted

1. O'Callaghan, J., C. Stevens, M. Roughan, C. Cornelisen, P. Sutton, S. Garrett, G. Giorli, R. O. Smith, K. I. Currie, S. H. Suanda, M. Williams, M. Bowen, D. Fernandez, R. Vennell, B. R. Knight, P. Barter, P. McComb, M. Oliver, M. Livingston, P. Tellier, A. Meissner, M. Brewer, M. Gall, S. D. Nodder, **M. Décima**, J. Souza, A. Forcén-Vazquez, S. Gardiner, K. Paul-Burke, S. Chiswell, J. Roberts, B. Hayden, B. Biggs, and H. Macdonald. In review. Developing an integrated ocean observing system for New Zealand. *Frontiers in Marine Science*
2. Zeldis, J. and **M. Décima**. In review. Summer mesozooplankton biomass, grazing activity and trophic flows in Subantarctic and Subtropical waters east of New Zealand. *Deep Sea Res. I.*

Published (peer reviewed)

1. **Décima, M.**, M. R. Stukel, L. Lopez-Lopez & M. R. Landry. 2018. The unique ecological role of pyrosomes in the Costa Rica Dome. *Limnol. Oceanogr.* doi.:10.1002/lno.11071
2. Stukel, M. R., **M. Décima**, M. R. Landry & K. E. Selph. 2018. Nitrogen and isotope flows through the Costa Rica Dome upwelling ecosystem: The crucial mesozooplankton role in export flux. *Global Biogeochem. Cycles* 32: 1815-1832 doi: 10.1029/2018GB005968
3. Stukel, M. R., **M. Décima**, & T. B. Kelly. 2018. A new approach for incorporating ¹⁵N isotopic data into linear inverse ecosystem models with Markov Chain Monte Carlo sampling. *PLOS ONE* 13: e0199123, doi: 10.1371/journal.pone.0199123
4. Valencia, B., **M. Décima**, & M. R. Landry. 2018. Environmental effects on mesozooplankton size structure and export flux at station ALOHA, North Pacific Subtropical Gyre. *Glob. Biogeochem. Cycles* 32: 289-305, doi: 10.1002/2017GB005785
5. **Décima, M.**, M. R. Landry, C. J. Bradley, and M. L. Fogel. 2017. Alanine $\delta^{15}\text{N}$ trophic fractionation in heterotrophic protists. *Limnol. Oceanogr.* 62: 2308-2322. doi:10.1002/lno.10567
6. Lopez-Lopez, L., I. Preciado, I. Muñoz, **M. Décima**, J. C. Molinero, and E. Tel. 2017. Does upwelling intensity influence feeding habits and trophic position of planktophagous fish? *Deep Sea Res. I.* doi:10.1016/j.dsr.2017.01.017
7. Landry, M. R., and **M. Décima**. 2017. Protistan microzooplankton and the trophic position of tuna: quantifying the trophic link between micro- and mesozooplankton in marine food webs. *ICES J. Mar. Sci.*, 74 (7): 1885–1892. doi: 10.1093/icesjms/fsx006.
8. Valencia, B., M. R. Landry, **M. Décima**, and C. C. S. Hannides. 2016. Environmental drivers of mesozooplankton biomass variability in the North Pacific Subtropical Gyre. *Journal of Geophysical Research: Biogeosciences* 121: 3131-3143, doi: 10.1002/2016JG003544
9. Stukel, M.R., C. R. Benitez-Nelson, **M. Décima**, A. G. Taylor, C. Buchwald, & M. R. Landry. 2016. The biological pump in the Costa Rica Dome: An open ocean upwelling system with high new production and low export. *J. Plankton Res.* 38 (2): 348-365. doi:10.1093/plankt/fbv097
10. Stukel, M. R., M. Kahru, C. R. Benitez-Nelson, **M. Décima**, R. Goericke, M. R. Landry, & M. D. Ohman. 2015. Using Lagrangian-based process studies to test satellite algorithms of vertical carbon flux in the eastern North Pacific Ocean. *J. Geophys. Res. – Oceans* 120: 7208-7222. doi: 10.1002/2015jc011264.

11. **Décima, M.**, M.R. Landry, M. R. Stukel, L. Lopez-Lopez and J. W. Krause. 2016. Mesozooplankton biomass and grazing in the Costa Rica Dome: amplifying variability through the plankton food web. *J. Plankton Res.*, 38(3): 317-330. doi:10.1093/plankt/fbv091
12. Landry, M. R., K. E. Selph, **M. Décima**, A. Gutiérrez-Rodríguez, M. R. Stukel, A. G. Taylor, & A. L. Pasulka. 2016. Phytoplankton production and grazing balances in the Costa Rica Dome. *J. Plankton Res.*, 38(2): 366–379. doi:10.1093/plankt/fbv089
13. Gutiérrez-Rodríguez, A, **M. Décima**, B. N. Popp & M. R. Landry. 2014. Isotopic invisibility of protozoan trophic steps in marine food webs. *Limnol. Oceanogr.* 59: 1590-1598, doi: 10.4319/lo.2014.59.5.1590.
14. **Décima, M.**, M.R. Landry, & B.N. Popp. 2013. Environmental perturbation effects on baseline $\delta^{15}\text{N}$ values and zooplankton trophic flexibility in the southern California Current Ecosystem. *Limnol. Oceanogr.* 58 (2) 624–634
15. Feinberg, L.R., C.T. Shaw, W.T. Peterson, **M. Décima**, Y. Okazaki & S.J. Ju. 2013. *Euphausia pacifica* brood sizes: a North Pacific synthesis. *J. Plankton Res.* 35(6): 1192-1206
16. Stukel, M.R., **M. Décima**, K.E. Selph, D.A. Taniguchi, & M.R. Landry. 2013. The role of *Synechococcus* in vertical flux in the Costa Rica upwelling dome. *Prog. Oceanogr.* 112: 49-59
17. Brum, J.R., J.J. Morris, **M. Décima**, & M.R. Stukel. 2014. Mortality in the Oceans: Causes and Consequences. p. 16-48. *In* P. F. Kemp [ed.], *Eco-DAS IX Symposium Proceedings*. Association for the Sciences of Limnology and Oceanography.
18. Stukel, M.R., K.A. Smith, **M. Décima**, & L. Hmelo. 2014. Detritus in the Marine Environment. p. 49-76. *In* P. F. Kemp [ed.], *Eco-DAS IX Symposium Proceedings*. Association for the Sciences of Limnology and Oceanography.
19. **Décima, M.**, M.R. Landry, and R.R. Rykaczewski. 2011. Broad scale patterns in mesozooplankton biomass and grazing in the eastern equatorial Pacific. *Deep Sea Res II* 58: 387-399.
20. Landry, M.R., K.E. Selph, A.G. Taylor, **M. Décima**, W.M. Balch, & R.R. Bidigare. 2011. Phytoplankton growth, grazing and production balances in the HNLC equatorial Pacific. *Deep Sea Res II* 58: 524-535.
21. **Décima, M.**, M.D. Ohman & A. De Robertis. 2010. Body size- dependence of euphausiid spatial patchiness. *Limnol. Oceanogr.* 55 (2): 777–788
22. Landry, M.R., **M. Décima**, M.P. Simmons, C.C.S. Hannides & E. Daniels. 2008. Mesozooplankton biomass and grazing responses to Cyclone Opal, a subtropical mesoscale eddy. *Deep Sea Res II* 55 (10-13): 1378-1388.

TECHNICAL REPORTS

1. **Décima, M.**, S. Nodder, A. Gutiérrez- Rodríguez, K. Safi, A. Saint-Macary, M. Meyers, F. Deans, M. R. Stukel, T. Kelly, K. Selph, F. Luskow, A. Lopes Dos Santos, M. Mendez-Sandín, D. Demory. 2019. Salp effects on the marine carbon cycle and pelagic food-web - Voyage Report TAN1810
2. Robinson, K., **Décima, M.**, M. Pinkerton 2019. Continuous Plankton Recorder sampling between New Zealand and the Ross Sea, 2013-2018. MPI project ZBD2013-03.
3. Bowden, B., M. Clark, A. Connell, R. Constantine, **M. Décima**, P. Escobar-Flores, N. Eton, A. Forcén-Vázquez, S. George, A. Gutierrez Rodriguez, M. Harvey, S. Hartery, P. Kuma, Y. Ladroit, P. Low, A. Marriner, J. McGregor, S. Mills, A. Pallentin, L. Riekkola, K. Safi, S. Searson, H. Sik Chae, and M. Walkington. 2018. The Ross Sea Environment and Ecosystem Voyage 2018. Voyage Report – TAN1802. March 2018
4. Robinson, K., **Décima, M.**, M. Pinkerton 2017. Update on Continuous Plankton Recorder measurements of zooplankton between New Zealand and the Ross Sea. MPI project ZBD2013-03.

5. Law, C., V. Cummings, N. Barr, L. Northcote, A. Gutierrez-Rodriguez, **M. Décima**, A. Marriner, B. Graham, Z. Fang, F. Deans, R. Allen, L. Hoffmann, F. Baltar, M. Gall. 2017. Progress Report to the CARIM Steering & Technical Advisory Group, NIWA Wellington.

GRANTS, HONORS & AWARDS

Antarctic Science Platform: Ross Sea Region Ecosystem Dynamics. Pinkerton et al. (pending)	2018
When do Salps bloom? Students co-design a mobile learning application for citizen science. Unlocking Curious Minds, Ministry of Prime Industries. M. Décima & C. Aguayo, \$NZ 30,000	2018
Marsden Fast-Track Award (Royal Society of New Zealand). M. Décima . The ocean vacuum-cleaner: Salp effects on the marine carbon cycle. \$NZ 300,000	2016
The influence of warming and acidification on the nutritional value of coastal plankton. Ministry of Prime Industries. 2016. C. Law, B. Graham, M. Décima , A. Kingston. \$NZ 80,000	2016
Resolving the trophic connection between protistan grazers and mesozooplankton in marine food webs using amino acid-specific stable isotope analyses. (PI: M. Landry, US\$ 572,998, National Science Foundation. M. Décima played major role in proposal writing, was funded as a postdoc 2013-2015)	2013-2016
Scripps GK-12 Fellowship (National Science Foundation)	2009-2010
Stout Fellowship	2008-2009
NSF Graduate Research Fellowship Honorable Mention	2006
NSF Graduate Research Fellowship Honorable Mention	2005
Alliance for Graduate Education and the Professoriate (AGEP) Fellowship (NSF)	2004-2005
Honors Undergraduate Thesis (UCSC)	2003
Highest Honors in Major and College Honors (UCSC)	2003

ORAL & OTHER NON PEER-REVIEWED PROCEEDINGS (27 total, 14 selected)

1. **Décima, M.**, M. Stukel, A. Gutiérrez- Rodríguez, K. Safi, and S. Nodder. Plankton process and export fluxes in subtropical waters northeast of New Zealand. NZMSS, Napier, New Zealand. 2018
2. Meyers, M., **M. Décima**, Q. Luan, L. Hoffmann, S. Wing. Copepod grazing and selectivity on natural prey communities during a high-temperature, low-pH mesocosm experiment. NZMSS, Napier, New Zealand. 2018
3. Aguayo, C., and **M. Décima**. Donde esta las salpas? Ciencia ciudadana bajo el agua. Congreso de Ciencias del Mar. Valdivia, Chile. 2018.
4. **Décima, M.**, M. Pinkerton. The Ross Sea Region MPA: Zooplankton baselines and sensitivity to climate change. International Marine Protected Area Congress IV (IMPAC4), La Serena, Chile, 2017.
5. **Décima, M.**, M. Pinkerton, K. Safi, M. Gall, A. Gutiérrez-Rodríguez, M. R. Stukel. Plankton food web structure and trophic flows in the Chatham Rise (New Zealand). New Zealand Marine Sciences Society. Wellington, New Zealand 2017.
6. **Décima, M.**, M. Pinkerton, K. Safi, & A. Gutiérrez-Rodríguez. Interdependence of lower food-web dynamics and mesozooplankton communities. ASLO Aquatic Sciences, Honolulu, HI. 2017.
7. **Décima, M.**, M. R. Landry, C. J. Bradley, and M. L. Fogel. ¹⁵N alanine trophic enrichment in protistan and metazoan consumers: widespread contribution of heterotrophic protists to pelagic food-webs. New Zealand Marine Sciences Society. Wellington, New Zealand 2016.

8. **Décima, M.**, K. Robinson, M. Pinkerton & R. Stewart. Zooplankton abundance and distribution patterns between New Zealand and the Ross Sea: what the Continuous Plankton Recorder can tell us and the value of long-term time series. New Zealand Marine Sciences Society. Wellington, New Zealand 2016.
9. **Décima, M.**, M. R. Landry, L. López-López & C. J. Bradley. Mesozooplankton grazing and trophic structure in the Costa Rica Dome. Association for the Sciences of Limnology and Oceanography (ASLO) Aquatic Sciences Meeting. Granada, Spain, 2015
10. **Décima, M.** Redes tróficas en el plankton: variabilidad e importancia del mesozooplancton. CICESE, Ensenada. April 2004
11. **Décima, M.**, M. R. Landry, M. McCormick, E. Gier & B. N. Popp. Using linear mixed-effects (LME) models to distinguish between baseline and trophic ¹⁵N enrichment: ENSO effects on zooplankton in the California Current. Association for the Sciences of Limnology and Oceanography (ASLO) Ocean Sciences Meeting. Salt Lake City, UT. 2012
12. **Décima, M.** 2011. Mesozooplankton trophic variability in a changing ocean. Ph.D. Thesis, University of California, San Diego.
13. **Décima, M.**, M. McCormick, M. R. Landry, E. Gier & B. Popp. Trophic relationships in two plankton species during and after a major ENSO event, in the California current. Long-Term Ecological Research, All Scientists Meeting. Estes Park, CO. 2009
14. **Décima, M.**, M. D. Ohman and A. De Robertis. Body size-dependence of euphausiid spatial patchiness. Global Oceans Ecosystem Dynamics (GLOBEC). Victoria, British Columbia, Canada. 2009

RESEARCH EXPEDITIONS (318 days total)

2018	Salp Particle expOrt and Oceanic Production (SalpPOOP) – (<i>R/V Tangaroa</i> , Chatham Rise New Zealand, 29 days, Chief scientist)
2018	Ross Sea Ecosystem and Environment voyage (<i>R/V Tangaroa</i> , Ross Sea Antarctica, 42 days)
2017 - ongoing	Munida Time-Series (<i>R/V Polaris</i> , bi-monthly, 8 days total)
2016	Cross-Shelf Exchange II Voyage – (<i>R/V Tangaroa</i> , Hauraki Gulf, New Zealand, 24 days)
2015	Fisheries Oceanography Voyage IV (<i>R/V Tangaroa</i> , Chatham Rise, New Zealand, 23 days)
2015	Fisheries Oceanography Voyage III – (<i>R/V Tangaroa</i> , Chatham Rise, New Zealand, 24 days)
2015	Cross-Shelf Exchange I Voyage (<i>R/V Tangaroa</i> , Hauraki Gulf, New Zealand, 22 days)
2010	Costa Rica Dome Flux and Zinc Experiments (FluZiE) Process cruise (<i>R/V Melville</i> , Eastern Tropical Pacific – 35 days)
2008	California Current Ecosystem (CCE) Process cruise (<i>R/V Melville</i> , 30 days)
2007	California Current Ecosystem (CCE) Process cruise – (<i>R/V Thompson</i> 21 days)
2006	California Current Ecosystem (CCE) Process cruise (<i>R/V Knorr</i> – 30 days)
2005	Equatorial Biocomplexity cruise (<i>R/V Revelle</i> , Equatorial Pacific– 30 days)
2004	California Cooperative Oceanic Fisheries Investigations (CalCOFI) cruise (<i>R/V David Starr Jordan</i> – 21 days)
2004	National Marine Fisheries (NMFS) Rockfish cruise (<i>R/V David Starr Jordan</i> – 21 days)

2003-2004 Center for Integrated Marine Technologies (CIMT) monthly day-long sampling cruises – *6 days total*.

TEACHING AND OUTREACH

2018-2019 When do Salps bloom? Students co-design a mobile learning application for citizen science. 2018. Partnership with Leigh School, Goat Island Marine Discovery Center, Goat Island Dive and Snorkel Shop, Auckland University of Technology, and National Institute of Water and Atmospheric Research.

2009-2010 NSF GK-12 program: Scripps Classroom Connections. *Teaching fellow (Earth Sciences, San Diego High School)*

2008 Teaching assistant: *California Coast Oceanography*, UCSD

2006-2008 Teaching assistant: *Beneath the Surface: Concepts in Biological Oceanography*. Academic Connections, UCSD

2005 Volunteer instructor and camp leader: *Sea series* (Aquatic Adventures, now Ocean Discovery Institute)

2005 *K-12 summer camp* (Aquatic Adventures, now Ocean Discovery Institute, San Diego CA.)

CHAired SESIONS

From Plankton Food Webs to Global Biogeochemical Cycles: Using Mechanistic Understanding to Scale up Microbial and Planktonic Processes. Moderators: M. R. Stukel; **M. Décima**; C. Robinson; P. Serret. Association for the Sciences of Limnology and Oceanography (ASLO) Ocean Sciences Meeting. New Orleans, LA (2016).

STUDENT MENTORING

2018 - *ongoing* Grace Cawley, BA. Student, University of San Diego

2017 – *ongoing* Morgan Meyers, PhD. Student, University of Otago

2017 Arielle Link, B.A. student, Colorado College

2016 – *2018* Connor Cayson, M.S. student, University of San Diego

2014 Maya Land, B.S. student, University of California, San Diego

2013 Lucia Lopez-Lopez, PhD candidate, Centro Oceanográfico de Santander (IEO), Spain

2012 Lisa Della Ripa, B.S. student, University of California, San Diego

2008 – 2009 Kate Tsyklevich, B.S. student, University of California, San Diego

2008 Mary McCormick, B.S. student, University of California, San Diego

2006 – 2007 Emy Daniels, M.S. student, University of California, San Diego

SCIENTIFIC SERVICE

Ongoing ad-hoc reviewer for *Progress in Oceanography*, *Aquatic Microbial Ecology*, *Marine Ecology Progress Series*, *Deep-Sea Research II*, *Journal of Geophysical Research: Oceans*, *National Science Foundation (USA)*, *Nature Geosciences*, *Fonds de la Recherche Scientifique*, *Biogeosciences*, *Polar Biology*, and *Deep-Sea Research I*.