

LESLIE F. NEW, PHD

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CURRICULUM VITAE

RESEARCH INTERESTS: Bayesian statistics; State-space models; Statistical ecology; Population consequences of disturbance; Human-wildlife conflict; Quantification of uncertainty

EDUCATION:

Ph.D. in Statistics and Biology, University of St Andrews (2010)

Thesis title: "Multi-species state-space modelling of the hen harrier (*Circus cyaneus*) and red grouse (*Lagopus lagopus scoticus*) in Scotland."

B.Sc. (cum laude) Natural Resources, Cornell University (2003)

Wildlife biology and management, emphasis on statistical and mathematical methods in Ecology

CAREER:

Assistant Professor of Statistics, Department of Mathematics and Computer Science, Ursinus College (2021-present)

Assistant Professor of Statistics, Department of Mathematics and Statistics, Washington State University Vancouver (2015-2021, tenure awarded prior to departure)

Post-doctoral Fellow, USGS Patuxent Wildlife Research Center (2012-2014)

Research Associate, National Research Council, Marine Mammal Commission (2011-2012)

Research Fellow, School of Biology, University of St Andrews (2009-2011)

Teaching Fellow, School of Mathematics and Statistics, University of St Andrews (2006-2009)

PUBLICATIONS:

Reed, J., Corkeron, P., **New, L.** and Harcourt, R. (*In submission*) Breaking down abundance to understand conservation for small populations: A case study of North Atlantic right whales. *Conservation Letters*

Bird, C., Pirotta, E., **New, L.**, Beirlich, K.C., Hildebrand, L., Fernandez Ajó, A., Torres, L. (*In revision*) Bubble blasts! An adaption for buoyancy regulation in shallow foraging gray whales. *Ecology and Evolution*

Colson, K.M., Pirotta, E., **New, L.**, Cade, D.E., Calambokidis, J., Bierlich, K.C., Bird, C.N., Fernandez Ajó, A., Hildebrand, L., Trites, A.W. and Torres, L.G. (*In revision*) Using biologging tags to quantify gray whale foraging behavior. *Marine Mammal Science*.

Bird, C., Pirotta, E., **New, L.**, Bierlich, K.C., Donnelly, M., Hildebrand, L., Fernandez Ajó, A., Torres, L. (*In press*) Growing into it: Evidence of an ontogenetic shift in gray whale use of foraging tactics. *Animal Behaviour*

Pirotta, E., Beirlich, K.C., **New, L.**, Hildebrand, L., Bird, C.N., Fernandez Ajó, A. and Torres, L.G. (2024) Modelling individual growth reveals decreasing gray whale body length and correlations with ocean climate indices at multiple scales. *Global Climate Change Biology*, doi.org/10.1111/gcb.17366

Silva, M., Oliveira, C., Prieto, R., Silva, M., **New, L.** and Pérez-Jorge, S. (2024) Bioenergetic modelling of a marine top predator's responses to changes in prey structure. *Ecology and Evolution*, 14: e11135. doi.org/10.1002/ece3.11135

Reed, J., **New, L.**, Corkeron, P. and Harcourt, R. (2024) Disentangling the influence of entanglement on recruitment in North Atlantic right whales. *Proceedings of the Royal Society B*, 291. doi.org/10.1098/rspb.2024.0314

- Pirotta, E., Fernandez Ajó, A., Bierlich, K.C., Bird, C., Buck, L., Haver, S., Haxel, J., Hildebrand, L., Hunt, K., Lemos, L.S., **New, L.**, Torres, L. (2023) Developing physiological dose-response functions for gray whales exposed to anthropogenic stressors. *Conservation Physiology*, 11. doi.org/10.1093/conphys/coad082
- Fernandez Ajó, A., Pirotta, E., Bierlich, K.C., Hildebrand, L., Bird, C.N., Hunt, K.E., Buck, C.L., **New, L.**, Dillion, D. and Torres, L.G. (2023) Assessment of a noninvasive approach to pregnancy diagnosis in gray whales through drone-based photogrammetry and faecal hormone analysis. *Royal Society of Open Science*, doi: 10.1098/rsos.230425
- Harrison, J., Ferguson, M., **New, L.**, Cleary, J., Curtice, C., DeLand, S., Fujioka, E., Halpin, P., Moore, R.B.T., Van Parijs, S. (2023) Biologically important areas for cetaceans within U.S. and adjacent waters: Updates and an application of a new scoring system. (2023) *Frontiers in Marine science*, 10:1081893. doi: 10.3389/fmars.2023.1081893
- Willsteed, E.A., **New, L.**, Ansong, J.O., Hin, V., Searle, K. and Cook, A.S.C.P. (2023) Advances in cumulative effects assessment and application in marine and coastal management. *Coastal Futures*. e18. doi: 10.1017/cft.2023.6
- Reed, J., **New, L.**, Corkeron, P. and Harcourt, R. (2022) Multi-state modeling of true reproductive states of individual female right whales provides new insights into their decline. *Frontiers in Marine Science*. doi: 10.3389/fmars.2022.994481
- Neuffer, S.J., Beltran, D., Jimenez-Perez, K., Clancey, L.F., Brown, A., **New, L.**, Cooper, C.D. (2022) AP-3 complex delta subunit gene, *ap3dl*, regulates melanogenesis and melanophore survival via autophagy in zebrafish (*Danio rerio*). *Pigment Cell & Melanoma Research*, **35**: 495-505.
- Pirotta, E., Booth, C., Calambokidis, J., Costa, D., Fahlbusch, J., Friedlaender, A., Goldbogen, J., Harwood, J., Hazen, E., **New, L.**, Santora, J., Watwood, S., Wertman, C. and Southall, B. (2022) From individual responses to population effects: Integrating a decade of multidisciplinary research on blue whales and sonar. *Animal Conservation*, **25**: 796-810 doi: 10.1111/acv.12785
- New, L.**, Simonis, J.L., Otto, M.C., Bjerre, E. Runge, M.C. and Millsap, B. (2021) Adaptive management to improve eagle conservation at terrestrial wind facilities. *Conservation Science and Practice* e449, doi: 10.1111/csp2.449
- Pirotta, E., Booth, C., Cade, D., Calambokidis, J., Costa, D., Fahlbusch, J., Friedlaender, A., Goldbogen, J., Harwood, J., Hazen, E., **New, L.** and Southall, B. (2021) Context-dependent variability in the predicted daily energetic costs of disturbance for blue whales. *Conservation Physiology*, **9** doi: 10.1093/conphys/coaa137
- Lopez, Z.C., Friesen, M.L., Von Wettberg, E., **New, L.** and Porter, S. (2021) Microbial mutualist distribution constrains spread of the invasive legume *Medicago polymorpha*. *Biological Invasions*, **23**: 843-856
- Williams, R., Cholewaik, D., Clark C.W., Erbe, C., George, J.C.G., Lacy, R.C., Leaper, R., Moore S.E., **New, L.**, Parsons, E.C.M., Rosenbaum, H.C., Rowles, T.K., Simmonds, M.P., Stimmelmayer, R., Suydam, R.S. and Wright, A.J. (2020) Chronic ocean noise and cetacean population models. *Journal of Cetacean Research and Management*, **21**: 85-94.
- Reed, J.T., Harcourt, R., **New, L.**, and Bilgman, K. (2020) Extreme effects of extreme disturbance: a simulation based approach to assess population specific responses. *Frontiers in Marine Science* doi: 10.3389/fmars2020.519845
- Pirotta, E., Hin, V., Mangel, M., **New, L.**, Costa, D.P., de Roos, A.M. and Harwood, J. (2020) Propensity for risk in reproductive strategy affects susceptibility to anthropogenic disturbance. *American Naturalist* doi: 10.1086/710150.
- New, L.**, Lusseau, D. and Harcourt, R. (2020) Dolphins and boats: when is disturbance, disturbing? *Frontiers in Marine Science* doi: 103389/fmars.2020.00353
- Bennion, L.D., Ferguson, J.A., **New, L.** and Schultz, C. (2020) Community-level effects of herbicide-based restoration treatments: Structural benefits but at what cost? *Restoration Ecology* doi: 10.1111/rec.13118.

- Senigaglia, V., **New, L.** and Hughs, M. (2020) Close encounters of the dolphin kind: Contrasting tourist support for feeding based on interactions with concern for dolphin welfare. *Tourism Management*, **77**: doi: 10.1016/j.tourman.2019.104007
- Pirotta, E., Mangel, M., Costa, D., Goldbogen, J., Harwood, J., Hin, V., Irvine, L.M., Mate, B.R., McHuron, E.A., Palacios, D., Schwarz, L. and **New, L.** (2019) Anthropogenic disturbance in a changing environment: modelling lifetime reproductive success to predict the consequences of multiple stressors on a migratory population. *Oikos*, **128**: 1340-1357
- Peterson, K., Neuffer, S., Bean, M., **New, L.**, Coffin, A. and Cooper, C. (2019) Melanosome maturation proteins Oca2, Mitfa and Vps11 are differentially required for cisplatin resistance in zebrafish melanocytes. *Experimental Dermatology*, **28**: 795-800
- Booth, S.R., Patten, K. and **New, L.** (2019) Response of estuarine benthic invertebrates to large-scale field applications of insecticide. *Estuarine, Coastal and Shelf Science*, **218**: 86-94
- Pirotta, E., Schwarz, L., Costa, D., Robinson, P. and **New, L.** (2019) Modelling the functional link between movement, feeding activity and condition in a marine predator. *Behavioural Ecology*, **30**: 434-445
- Pirotta, E., Booth, C., Costa, D., Fleishman, E., Kraus, S., Lusseau, D., Moretti, D., **New, L.F.**, Schick, R., Schwarz, L., Simmons, S., Thomas, L., Tyack, P., Weise, M., Wells, R. and Harwood, J. (2018) Understanding the population consequences of disturbance. *Ecology and Evolution*, **8**: 9934-46
- Pirotta, E., Katzner, T., Miller, T., Duerr, A., Braham, M., and **New, L.F.** (2018) State-space modelling of the three-dimensional behaviour of a soaring bird provides new insights to migratory flight. *Functional Ecology*, **32**: 2205-2215
- Pirotta, E., **New, L.** and Marcoux, M. (2018) Modelling beluga habitat use and baseline exposure to shipping traffic to design effective protection against prospective industrialization in the Canadian Arctic. *Aquatic Conservation*, **28**: 713-722
- Pirotta, E., Edwards, E., **New, L.F.** and Thompson, P. (2018) Central place foragers and moving stimuli: A hidden-state model to discriminate the processes affecting seabird movements. *Journal of Animal Ecology*, **87**: 1116-1125.
- Pirotta, E., Mangel, M., Costa, D., Mate, B., Goldbogen, J., Palacios, D., Huckstadt, L., McHuron, E., Schwarz, L. and **New, L.** (2018) A dynamic state model of migratory behavior and physiology to assess the consequences of environmental variation and anthropogenic disturbance on marine vertebrates. *American Naturalist*, **191**: E40-E56
- Tollit, D.J., Harwood, J., Booth, C.G., Thomas, L., **New, L.**, and Wood, J.D. (2016) *Cook Inlet Beluga Whale PCoD Expert Elicitation Workshop Report*. Prepared by SMRU Consulting North America. 29 September 2016, SMRUC-NA-NOAA0915, 54p.
- Fleishman, E., Costa, D.P., Harwood, J., Kraus, S., Moretti, D., **New, L.F.**, Schick, R.S., Schwarz, L.K., Simmons, S.E., Thomas, L. and Wells, R.S. (2016) Monitoring population-level responses of marine mammals to disturbance. *Marine Mammal Science*, **32**: 1004-1021.
- Harwood, J., King, S., Booth, C., Donovan, C., Schick, R.S., Thomas, L. and **New, L.** (2016) Understanding the population consequences of acoustic disturbance for marine mammals. In, Pooper, A.N. and Hawkins, A. (eds.) *The Effects of Noise on Aquatic Life II*, Springer Science+Business Media, NY, pp 417-423.
- Pirotta, E., Harwood, J., Thompson, P.M., **New, L.**, Cheney, B., Arso, M., Hammond, P.S., Donovan, C. and Lusseau, D. (2015) Predicting the effects of human developments on individual dolphins to understand potential long-term population consequences. *Proceedings of the Royal Society B*, **282**: 2109-2017.
- McMahon, C.R., **New, L.F.**, Fairly, E.J., Hindell, M.A. and Burton, H.R. (2015) The effects of body size and climate on post weaning survival of elephant seals at Heard Island. *Journal of Zoology*, **297**: 301-308.
- Barraquand, F., **New, L.F.**, Redpath, S. and Matthiopoulos, J. (2015) Indirect effects of primary prey population dynamics on alternative prey. *Theoretical Population Biology*, **103**: 44-59.

- New, L.**, Bjerre, E., Millsap, B., Otto, M.C., and Runge, M.C. (2015) Incorporating uncertainty into a collision risk model for predicting avian fatalities at wind facilities: An example using golden eagles, *Aquila chrysaetos*. *PLOS ONE* 10(7): e0130978. doi:10.1371/journal.pone.0130978
- New, L.F.**, Hall, A.J., Harcourt, R., Kaufmann, G., Parsons, E.C.M., Pearson, H.C., Consantino, A.M. and Schick, R.S. (2015) The modelling and assessment of whale-watching impacts. *Ocean and Coastal Management*, **115**: 10-16.
- Pirotta, E., **New, L.**, Harwood, J. and Lusseau, D. (2014) Activities, motivations and disturbance: fitting a state-space model to bottlenose dolphin behavioural data in Doubtful Sound, New Zealand. *Ecological Modelling*, **282**: 44-58.
- New, L.F.**, Clark, J.S., Costa, D.P., Fleishman, E., Hindell, M.A., Klanjscek, T., Lusseau, D., Kraus, S., McMahon, C.R., Robinson, P.W., Schick, R.S., Schwarz, L.K., Simmons, S.E., Thomas, L., Tyack, P. and Harwood, J. (2014) Estimating the long-term fitness of southern elephant seals on the basis of short-term measures of behaviour. *Marine Ecology Progress Series*, **496**: 99-108.
- Moretti, D., Thomas, L., Marques, T., Harwood, J., Dilley, A., Neales, B., Shaffer, J., McCarthy, E., **New, L.**, Jarvis, S. and Morrissey, R. (2014) A risk function for behavioral disruption of Blainville's beaked whales (*Mesoplodon densirostris*) from Mid-Frequency Active sonar. *PLOS ONE*, **9**: e85064.
- New, L.**, Moretti, D., Hooker, S., Costa, P. and Simmons, S. (2013) An energetics model for the survival and reproduction of beaked whales (family Ziphiidae). *PLOS ONE*, **8**: e68725. doi:10.1371/journal.pone.0068725
- Schick, R.S., **New, L.F.**, Thomas, L., Costa, D.P., Hindell, M.A., McMahon, C.R., Robinson, P.W., Simmons, S.E., Thums, M., Harwood, J. and Clark, J.S. (2013) Estimating resource acquisition and at-sea body condition of a marine predator. *Journal of Animal Ecology*, **82**: 1300-1315.
- Williams, R., Vikingsson, G.A., Gislason, A., Lockyer, C., **New, L.**, Thomas, L. and Hammond, P.S. (2013) Evidence for density-dependent changes in body condition and pregnancy rate of North Atlantic fin whales over four decades of varying environmental conditions. *ICES Journal of Marine Science*, **70**: 1273-1280.
- New, L.F.**, Harwood, J., Thomas, L., Donovan, C., Clark, J.S., Hastie, G., Thompson, P.M., Cheney, B., Scott-Hayward, L. and Lusseau, D. (2013) Modeling the biological significance of behavior change in coastal bottlenose dolphins in response to disturbance. *Functional Ecology*. **27**:314-322.
- New, L.F.**, Buckland, S.T., Redpath, S. and Matthiopoulos, J. (2012) Modelling the impact of hen harrier management measures on a red grouse population in the UK. *Oikos*, **121**:1061-1072.
- New, L.F.**, Buckland, S.T., Redpath, S. and Matthiopoulos, J. (2011) Hen harrier management: Insights from demographic models fit to population data. *Journal of Applied Ecology*, **48**:1187-1194.
- New, L.F.**, Matthiopoulos, J., Redpath, S. and Buckland, S.T. (2009) Fitting models of multiple-hypotheses to partial population data: Investigating the causes of cycles in red grouse. *American Naturalist*, **174**:399-412.

GRANTS AND CONTRACTS:

- US Department of Agriculture and National Institute of Food and Agriculture (2024-2027), co-PI: The microbial calendar: When do farmers see effects of cover cropping on microbial communities, soil functions and crop performance? **\$231,177 US**
- National Institute of Health (2023-2018), co-PI: Determining the ototoxic potential of COVID-19 therapeutics using machine learning and in vivo approaches: **\$78,005 US**
- National Science Foundation (2021-2025), PI: Collaborative Research: Modeling organismal responses to changing ecological regimes via investigation of stress, growth and reproduction in the longest-lived mammal: **\$295,671 US**

Office of Naval Research (2020-2023), co-PI: Finding patterns within the noise: Modeling baleen whale response to multiple stressors through replicate physiological sampling of gray whales: **\$302,934 US**

Snowy Hydro (2022), consultant The Analytical Edge (2021) working as facilitator and expert elicitation lead: Snowy 2.0 and Redfin Perch Expert Elicitation: **\$40,000 US**

Department of Agriculture Water and the Environment, Australia (2021-2022), consultant with The Analytical Edge: Developing Regulations for Bird and Bat Management Plans: **\$30,000 US**

National Oceanic and Atmospheric Administration (2020-2022), facilitator: Biologically Important Areas Round II – Expert Elicitation: **\$20,000 US**

U.S. Department of Energy (2019-2022), co-PI: Developing and Evaluating a Smart Curtailment Strategy Integrated with a Wind Turbine Manufacturer Platform: **\$147,569 US**

Chevron Australia (2021), consultant with The Analytical Edge working as facilitator and expert elicitation lead: Jansz-10 Subsea Compression Facility Expert Elicitation: **\$24,500 US**

U.S. Department of Energy (2021), advisor: Ultrasonic jet bat deterrent system advancement: **\$67,716 US**

U.S. Fish and Wildlife Service, Cooperative Ecosystem Study Unit grant (2019-2024), lead scientist: Low risk prior development and other activities: **\$40,000 US**

Office of Naval Research (2019-2021), co-PI: Behavioural Response Studies for the Population Consequences of Disturbance (BRS4PCoD): **\$435,430 US**

Office of Naval Research (2016-2019), co-PI: PCoD+: Developing widely-applicable models of the population consequences of disturbance: **\$1,833,972 US**

Sea Mammal Research Unit, LLC (2019), facilitator: Population consequences of disturbance expert elicitation for Pacific walrus: **\$5,000 US**

U.S. Fish and Wildlife Service, Cooperative Ecosystem Study Unit grant (2015-2018), lead scientist: Refinement of eagle population model and Bayesian risk models: **\$56,085 US**

Sea Mammal Research Unit, LLC (2015), facilitator: Population consequences of disturbance expert elicitation for sperm whales: **\$3,200 US**

Washington State University, External Mentor Grant (2015): expert elicitation and risk for assessing the population consequences of disturbance: **\$4,750 US**

Sea Mammal Research Unit, LLC (2013), co-investigator: Assessing the population consequences of the T2 Port of Vancouver's expansion on southern resident killer whales: **~\$127,000 US**

Sea Mammal Research Unit, LLC (2012), lead scientist: Scoping model for the population consequences of disturbance on southern resident killer whales: **\$25,000 US**

National Research Council (2011-2012), Research Associate: Cumulative Effects on Marine Mammals: **\$60,000 US**

Scottish Natural Heritage (2010-2011), co-investigator: Dolphins and development: data analysis and spatial model: **£40,000 (~\$60,000 US)**

COMMITTEES, PANELS, AND MEMBERSHIPS:

Co-Chair, International Whaling Commission Scientific Committee sub-Committee on Abundance Estimates, Status of Stocks, and International Cruises (2021-present)

National Oceanic and Atmospheric Association **Pacific Scientific Review Group** (2019-present)

Renewable Energy Wildlife Institute (previously American Wind and Wildlife Institute) **Scientific Advisory Committee** (2018-present)

International Statistical Ecology Conference **Scientific Committee** (2018-present), **Code of Conduct Committee** (2019-present), and **Long-term Planning Committee** (2014-present)

Society for Marine Mammalogy (2017-present)

Chair, Council for Equity, Diversity and Inclusion, Washington State University Vancouver (2020-2021)

International Union for Conservation of Nature **Western Grey Whale Advisory Panel** (2019-2022)

Chair, International Whaling Commission Scientific Committee sub-Committee on Whale-watching (2019-2021)
Member, Council for Equity, Diversity and Inclusion, Washington State University Vancouver (2016-2021)
Commission on Gender Identity/Expression and Sexual Orientation, Washington State University (2015-2021)
Vice-Chair, Council for Equity, Diversity and Inclusion, Washington State University Vancouver (2018-2020)
Sustainable Development **Teaching Council**, University of St Andrews (2006-2011)
Convenor of the inter-sessional working group on the Modelling and Assessment of Whale-watching Impacts (2013-2023)

JOURNAL MANAGEMENT:

- **Subject Editor**, *Frontiers in Marine Science* (2022-present)
- **Subject Editor**, *Journal of Cetacean Research and Management* (2017-present)
- **Special Edition Editor**, *Frontiers in Marine Science* (2020-2023)

CONFERENCE PRESENTATIONS:

Joint meeting of Statistical Ecology and Environmental Monitoring and the International Biometric Society Biometrics in the Bay of Islands, Waitangi, New Zealand (2023): **Oral presentation**: Species distribution models for eagle use in the continental United States.

International Conference on Advances in Interdisciplinary Statistics and Combinatorics, Greensboro, NC (2022): **Oral presentation**: “Balancing wind energy production and bat fatalities”

24th Biennial Conference on the Biology of Marine Mammals, Palm Beach, FL (2022): **co-author** on oral presentation: “Listening to mothers: modeling the true reproductive states of individual female right whales provides new insights into their decline”

International Statistical Ecology Conference, Cape Town, South Africa (2022): **Co-author** oral presentation: “Using a Bayesian multi-state mark-recapture model to assess cost of first reproduction and influence of entanglement on recruitment in female North Atlantic right whales”

Virtual Marine Mammals of the Holarctic Conference, Russia (2021) **Oral presentation** “Assessing Cumulative Effects Using a Threat Severity Framework”

Virtual International Statistical Ecology Conference, Sydney Australia (2020) **Oral presentation** “Modelling Butterfly Movement Using Multi-scale Hidden Markov Models”

2nd World Marine Mammal Conference, Barcelona, Spain (2019) **Poster** “The effects of anthropogenic disturbance in a changing environment on the lifetime reproductive success of eastern North Pacific blue whales (*Balaenoptera musculus*)”

Western North America Region of the International Biometrics Society, Portland, OR (2019) **Oral presentation** “Hidden Markov Models for Animal Movement”

International Statistical Ecology Conference, St Andrews, Scotland (2018): **Poster** “Predicting the population consequences of disturbance (PCoD) in a data poor scenario”, **session chair**

22st Biennial Conference on the Biology of Marine Mammals, Halifax, Nova Scotia (2017): **Oral presentation** “Everything in Context”, conference workshop “Exploring the use of expert elicitation for the interim assessment of the population consequences of disturbance”, **session co-chair, judge of student presentations and posters**

International Statistical Ecology Conference, Seattle WA (2016): **Oral presentation** “Statistical ecology and management: Boundary issues”, **session chair**

Southern California Marine Mammal Workshop, Newport Beach CA (2016): **Oral presentation** “Modelling whale-watching impacts”

Joint Mathematics Meeting, Seattle WA (2016): **Oral presentation** “Modelling remote sensing data in ecology”

21st Biennial Conference on the Biology of Marine Mammals, San Francisco CA (2015): **Invited workshop presentations** “Population Consequences of Disturbance” and “Bridging the gap between behaviour, health and population consequences”

International Marine Conservation Congress, Glasgow Scotland (2014): **Organizer of a focus group and symposium** on “The modeling and assessment of whale-watching impacts.”

International Statistical Ecology Conference, Montpellier (2014): **Oral presentation** “Ecological modelling in BUGS: Some tricks of the trade”

Raptors of the Northwest Symposium, Pasco WA (2014): **Oral presentation** “Predicting golden eagle fatalities at wind facilities in the face of uncertainty.”

International Congress for Conservation Biology, Baltimore MD (2013): **Poster** “Adaptive management of golden eagles on wind farms in the U.S.”

International Statistical Ecology Conference, Oslo (2012): **Oral presentation** “The relationships between individual behaviour, foraging and fitness for southern elephant seals, and the connections to population dynamics”

Ecological Society of America Meeting, Austin TX (2011): **Oral presentation** “Relations among foraging, disturbances to foraging, and vital rates in southern elephant seals”

Bio-logging Conference, University of Tasmania (2011): **Poster** “The Population Consequences of Disturbance”

International Statistical Ecology Conference, University of Kent (2010): **Oral presentation** “Multi-species state-space modelling of the hen harrier and red grouse in and Scotland”

National Centre for Statistical Ecology Conference, University of St Andrews (2006): **Oral presentation** “Population dynamics models for the hen harrier and red grouse”

SCIENCE COMMUNICATION:

Invited Speaker, Hatfield Marine Science Center Speaker Series (2024): “Statistics: The Dark Side of Ecology” <https://hmsc.oregonstate.edu/pastseminars>

Ted Talk, TedxUrsinusCollege (2023): “The Mathematics of Ecology” <https://www.youtube.com/watch?v=ZPagoo7MQow>

Podcast, Marine Conservation Happy Hour (2020): “Explaining Statistics using Star Wars” <https://tinyurl.com/y3qdhu5q>

Podcast, Marine Conservation Happy Hour (2020): “Inspiration through Stats in Marine Biology with Dr. Leslie New” <https://tinyurl.com/yy46qc6y>

Podcast, Marine Conservation Happy Hour (2020): “How Dr. Leslie New went from Remedial Math to Earn a PhD in Statistics and Now Works on Calculating the Effects of Underwater Noise on Marine Mammals” <https://tinyurl.com/y53g76tm>

Podcast, Marine Mammal Science (2020): “Why Statistical Ecology is So Cool” <https://tinyurl.com/y2orrsgs>

Public Talk, Science on Tap (2019): Science is Stranger than Fiction: It’s a Cruel Natural World”

Public Talk and **podcast**, Science on Tap (2018): “Science is Stranger than Fiction: Death and the Afterlife” <https://tinyurl.com/y484on5k>

Public Talk and **podcast**, Science on Tap (2018): “Inventive Connections” <https://tinyurl.com/y4llcght>

TEACHING:

Lectured, Department of Mathematics and Computer Science, Ursinus College (2021-present)

Developed capstone course in Statistical Modelling for the Statistics Major at Ursinus College (2024)

Revised a course in Statistical Reasoning, a statistics course for non-STEM students, at Ursinus College (2023)

Lectured, Department of Mathematics and Statistics, Washington State University (2015-2021)

Developed an online undergraduate course in Decision Analysis for a degree in Data Analytics, Washington State University (2017)

Developed a graduate course in Applied Multivariate Statistics, Washington State University, Vancouver (2016)

Co-developed a course in Science Communication, Washington State University (2016)

Developed a conjoint graduate and undergraduate course in Statistics for Engineers and Scientists, Washington State University Vancouver (2015)

Developed a graduate course in Regression Analysis, Washington State University, Vancouver (2015)

Lectured, course in Structured Decision Making at the US Fish and Wildlife Services National Conservation Training Center (2014)

Facilitated real world case studies for Introduction to Structured Decision Making at the US Fish and Wildlife Services' National Conservation Training Center (2013-2014)

Lectured, School of Geography and Geosciences, University of St Andrews (2009-2011)

Developed senior lectures for Fisheries Research, University of St Andrews (2009)

Developed Master's lectures and seminars on biodiversity, University of St Andrews (2009)

Lectured, School of Biology, University of St Andrews (2008-2011)

Developed senior statistics lectures for Sustainable Development: Case Studies II, University of St Andrews (2008)

Lead developer for junior lectures on the application of statistics to real-world problems in Case Studies in Sustainable Development I, University of St Andrews (2007)

Lectured, School of Mathematics and Statistics, University of St Andrews (2006-2011)

Wrote and co-developed sophomore lectures on statistics for the course Sustainable Development: Ecological and Environmental Aspects, University of St Andrews (2006)

STUDENT MENTORING AND SUPPORT:

Advisor for students majoring in Mathematics, Statistics and Computer Science at Ursinus College (2023-present)

First-year Advisor for incoming Freshmen at Ursinus College (2023-2024)

Supervised students as part of the Department of Mathematics and Computer Science NSF REU, using species distribution models to predict eagle use in the United States (2023)

Supervised Biology honor students independent research projects at Ursinus College (2023)

Co-supervised students who took part in the Summer Fellows Program at Ursinus College, looking into AI to identify bowhead whales (2022).

Co-supervised PhD student at the University of the Azores, Portugal (2020 – present)

Co-supervised Masters and PhD student in Marine Science at Macquarie University, Australia (2018-2023)

Supervised students who took part in a Research Experience for Undergraduates at Washington State University, Vancouver (2015-2020)

Committee Member for Masters and PhD students in Ecology, Biology, Sociology and Anthropology at Washington State University, Vancouver (2014-2022)

Supervised Masters and PhD students in the fields of Ecology, Environmental Science, and Marine Mammology at Macquarie University, Murdoch University and Washington State University (2013-2023)

Co-supervised Senior Honours projects in Sustainable Development, University of St Andrews (2008-2011)

Provided **statistical consulting** for Honours and Master's projects in Sustainable Development, University of St Andrews (2008-2011)

REFEREE:

Animal Conservation, Annals of Applied Statistics, Biological Conservation, Conservation Science and Practice, Endangered Species Research, Ecological Applications, Environmental Impact Assessment Review, Frontiers in Marine Science, Journal of Animal Ecology, Journal of Applied Ecology, Journal of Cetacean Research and Management, Journal of Fish and Wildlife Management, Marine Mammal Science, Methods in Ecology and Evolution, Proceeding of the Royal Society B, Physiological and Biochemical Zoology, PLoS ONE, Progress in Oceanography