

John F. Benson, Ph.D.

Assistant Professor of Vertebrate Ecology
School of Natural Resources

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<https://scholar.google.com/citations?user=lq4fh3UAAAAJ&hl=en>

EDUCATION

PhD, Ecology and Conservation Biology, May 2013

Trent University, Peterborough, ON, Canada GPA: A+

Dissertation: Hybridization Dynamics between Wolves and Coyotes

Master of Science, Wildlife Ecology, May 2005

Louisiana State University, Baton Rouge, LA GPA: 4.0

Thesis: Ecology and Conservation of Louisiana Black Bears in the Tensas River Basin and Reintroduced Populations

Bachelor of Science, Wildlife, May 2001

Humboldt State University, Arcata, CA GPA: 3.97

Thesis: Use of Cover Types by Sierra Nevada Red Fox in the Southern Cascade Range

PROFESSIONAL EXPERIENCE

Assistant Professor of Vertebrate Ecology – January 2017 – current

School of Natural Resources, Applied Ecology Mission Area
University of Nebraska, Lincoln, NE

Adjunct Graduate Professor -- July 2017 -- current

Trent University, Environmental & Life Sciences Graduate Program
Peterborough, ON Canada

Affiliate – February 2021 – Current

La Kretz Center for California Conservation Science
Institute of the Environment & Sustainability
University of California, Los Angeles,

Fellow of the Center for Great Plains Studies – April 2017 -- current

Postdoctoral Research Fellow – July 2016 – Dec 2016

Monterey Bay Aquarium, Conservation & Science, Monterey, CA
Stanford University, Biology Department, Hopkins Marine Center, Pacific Grove, CA

- I developed models to estimate juvenile survival and mortality risk for white sharks
- I developed dynamic movement models for pelagic marine predators

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- I am investigating temporal patterns in presence of white sharks at coastal aggregation sites
- I identified and tagged white sharks from small boats on the Pacific Ocean

La Kretz Center for California Conservation Postdoctoral Fellow -- Sep 2014 – July 2016

La Kretz Center for California Conservation Science

Institute of the Environment & Sustainability, University of California, Los Angeles, CA

- I developed a PVA for pumas relative to inbreeding and landscape dynamics
- I modeled movement and resource selection of pumas along an urban-wildland gradient
- I studied population and spatial dynamics of bobcats relative to urbanization

Principal Investigator, Predator-Prey Research -- May 2013 – June 2014

Division of Wildlife Conservation, Alaska Department of Fish & Game, Fairbanks, AK

- Project leader for predator-prey dynamics between moose and their predators.
- I estimated moose, bear, and wolf population size, survival, and reproductive parameters
- I designed and led field studies, managed budgets (>\$160K per annum), analyzed data
- I captured moose and bears via helicopter darting or netgunning, conducted browse surveys

Graduate Research Assistant -- September 2007 – April 2013

Trent University, Peterborough, Ontario, Canada

- I supervised all field operations, analyzed data, published results
- I played lead role in study design and contributed to securing funding through grant writing
- I captured wolves, coyotes, hybrids, visited dens, investigated kills, sampled DNA
- I supervised >30 technicians, coordinated w/ agencies, media relations, extensive outreach

Biological Scientist, Panther Research -- July 2005 – April 2007

Florida Fish & Wildlife Conservation Commission,

Fish & Wildlife Research Institute, Naples, FL

- Panther research: study design, fieldwork, data analysis, manuscript publication
- Collaborated with multiple federal agencies (NPS, USFWS) and universities
- Panther capture, aerial and ground monitoring, den work

Graduate Research Assistant -- June 2002 – April 2005

School of Renewable Natural Resources, Louisiana State University, Baton Rouge, LA

- I was lead graduate student in charge of fieldwork, data analysis, and manuscript publication
- Bear captures (culverts, snares, darting), tree climbing, den work, telemetry
- Media relations, coordinated w/ state, federal, private agencies, supervised >12 technicians

PEER REVIEWED PUBLICATIONS (41)

*Graduate Student Mentee

Riley, S.P.D., Sikich, J.A., **Benson, J.F.** 2021. Big cats in the big city: Spatial ecology of mountain lions in greater Los Angeles. *Journal of Wildlife Management* (Accepted)

Cove, M.V.,... **Benson, J.F.** ... et al. 2021. Snapshot USA: the first coordinated national camera trap survey of the United States. *Ecology. In Press.*

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Fill, C.T.*, Allen, C.R., Twidwell, D., **Benson, J.F.** 2021. Northern long-eared bat roost use at the western periphery of their range. *American Midland Naturalist*. *In press*.

Benson, J.F., Sikich, J.A., S.P.D. Riley. 2020. Survival and competing mortality risks of mountain lions in a major metropolitan area. *Biological Conservation* 241

Benson, J.F., Mahoney, P.J., Wickers, T. W. et al. 2020. Ecological roles of top predators in isolated mountain ranges. *Ecological Applications* 30

Oliveira, T.*, **Benson, J.F.**, Thompson, C., Patterson, B.R. 2020. Resource selection at homesites by wolves and eastern coyotes in a *Canis* hybrid zone. *Ecosphere* 11 (*Cover Article*)

Keiter, D.A.*, Patterson, B.R., Rodger, A.R., **Benson, J.F.** 2020. Camera traps detect prey of northern carnivores. *Northeastern Naturalist* 27.

Benson, J.F., Mahoney, P.J., Wickers, T. W. et al. 2019. Extinction vortex dynamics of top predators isolated by urbanization. *Ecological Applications*. 29.

Raynor, E.J., ...**Benson J.F.**...et al. 2019. Noise does not surpass land cover in explaining habitat selection of greater prairie-chicken (*Tympanichus cupido*). *The Condor* 121.

*Keiter, D.A., Patterson, B.R., **Benson, J.F.** 2019. Implications of a beaver pelt lining the natal chamber of a wolf den. *Northeastern Naturalist* 26.

Benson, J.F., Jorgensen, S.J., J.B. O'Sullivan, Winkler, C., White, C., Garcia-Rodriguez, E., Sosa-Nishizaki, O Lowe, C.G. 2018. Juvenile survival, competing risks, and spatial variation in mortality risk of a marine apex predator. *Journal of Applied Ecology* 55:2888-2897.

Heppenheimer... **Benson, J.F.**... et al. 2018. Population genomic analysis of North American eastern wolves (*Canis lycaon*) supports their conservation priority status. *Genes* 10: 1-17.

Benson, J.F., Loveless, K.M., Rutledge, L.Y., Patterson, B.R. 2017. Ungulate predation and ecological roles of wolves and coyotes in eastern North America. *Ecological Applications* 27:718-733 (*Cover Article*).

McLaren, A.A., **Benson J.F.**, Patterson B.R. 2017. Multi-scale habitat selection by cow moose (*Alces alces*) at calving sites in central Ontario. *Canadian Journal of Zoology* 95:891-899.

Benson, J.F., Mahoney, P.J., Sikich, J.A., Serieys, L.E.K., Pollinger, J.P., Ernest, H.B., Riley, S.P.D. 2016. Demographic, genetic, and landscape interactions threaten viability of a large carnivore in a major metropolitan area. *Proceedings of the Royal Society B* 283 (*Cover Article*)

Benson, J.F., Sikich, J.A., Riley, S.P.D. 2016. Population and individual-level resource selection patterns of mountain lions preying on mule deer along an urban-wildland gradient. *PLOS-One* 11.

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Little, A.R., **Benson, J.F.**, Chamberlain, M.J. Conner, L.M., Warren, R.J. 2016. Survival and cause-specific mortality of female Eastern wild turkeys in 2 longleaf pine savannas. *Wildlife Biology* 22:238-245.

Patterson, B.R., Mills, K.J., Middel, K.R., **Benson, J.F.**, Obbard, M.E. 2016. Influence of predation on seasonal and diel timing of moose calving in Ontario. *PLOS-One* 11.

Benson, J.F., Mahoney, P.J., Patterson, B.R. 2015. Spatiotemporal variation in selection of roads influences mortality risk for canids in an unprotected landscape. *Oikos* 124:1164-1173.

Benson, J.F., Mills, K.J., Patterson, B.R. 2015. Resource selection by wolves at dens and rendezvous-sites in Algonquin Park, Canada. *Biological Conservation* 182:223-232.

Benson, J.F., and B.R. Patterson. 2015. Spatial overlap, proximity, and habitat-use by individual wolves within the same packs. *Wildlife Society Bulletin* 39:31-40

Benson, J.F., Patterson, B.R, Mahoney, P.J. 2014. A protected area influences genotype-specific survival and the structure of a *Canis* hybrid zone. *Ecology* 95:254-264. (**Cover Article**).

Gardner, C.L., Pamperin, N.J., **Benson, J.F.** 2014. Movement patterns and space use of maternal grizzly bears influence cub survival in Interior Alaska. *Ursus* 25:121-138.

Benson, J.F. 2013. Improving rigor and efficiency of use-availability habitat selection analyses with systematic estimation of availability. *Methods in Ecology and Evolution* 4:244-251.

Benson, J.F., Patterson, B.R. 2013. Inter-specific territoriality in a *Canis* hybrid zone: spatial segregation between wolves, coyotes, and hybrids. *Oecologia* 173:1539-1550.

Benson, J.F., Mills, K.J., Loveless, K.M., Patterson, B.R. 2013. Genetic and environmental influences on pup mortality risk for wolves and coyotes within a *Canis* hybrid zone. *Biological Conservation* 166:133-141.

Benson, J.F., Patterson, B.R. 2013. Moose predation by eastern coyotes and coyote × wolf hybrids. *Canadian Journal of Zoology*. 91:837-841.

Patterson, B.R., **Benson, J.F.**, Middel, K.R., Mills, K.J. Obbard, M.E. 2013. Moose-calf mortality in central Ontario, Canada. *Journal of Wildlife Management* 77: 832-841.

Benson, J.F., Patterson, B.R., Wheeldon, T.J. 2012. Spatial genetic and morphologic structure of wolves and coyotes in relation to environmental heterogeneity in a *Canis* hybrid zone. *Molecular Ecology* 21:5934-5954.

Benson, J.F., Lotz, M.A., Land, E.D., Onarato, D.P. 2012. Evolutionary and practical implications of pseudo-estrus behavior in Florida panthers (*Puma concolor coryi*). *Southeastern Naturalist* 11:149-154.

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- Murray, D.L., Hussey, K., Finnegan, L., Lowe, S., Price, G., **Benson, J.F.** et al. 2012. Assessment of status and viability of a moose population at the southern range limit in Ontario. *Canadian Journal of Zoology* 90:422-434.
- Benson, J.F.**, Hostetler, J.H., Onorato, D., Johnson, W.E., Roelke, M., O'Brien, S.J., Jansen, D., Oli, M.K. 2011. Intentional genetic introgression influences survival of adults and sub-adults in a small, inbred felid population. *Journal of Animal Ecology* 80:958-966. (*Cover Article*)
- Benson, J.F.**, Lotz, M.A., Jansen, D. 2008. Natal den selection by Florida panthers. *Journal of Wildlife Management* 72:405-410.
- Land E.D., Shindle, D.B., Kawula, R., **Benson, J.F.**, Lotz, M.A., Onorato, D.P. 2008. Florida panther habitat selection analyses of concurrent GPS and VHF telemetry data. *Journal of Wildlife Management* 72:633-639.
- Benson, J.F.**, Chamberlain, M.J. 2007. Space use, movements, survival, and reproduction of reintroduced female Louisiana black bears. *Journal of Wildlife Management* 71:2393-2403.
- Benson, J.F.**, Chamberlain, M.J. 2007. Space use and habitat selection of female Louisiana black bears in the Tensas River Basin of Louisiana. *Journal of Wildlife Management* 71:117-126.
- Benson, J.F.**, Chamberlain, M.J., Leopold, B.D. 2006. Regulation of space use in a solitary felid: population density or prey availability? *Animal Behaviour* 71:685-693.
- Benson, J.F.**, Chamberlain, M.J. 2006. Cub adoption by a translocated female Louisiana black bear. *Ursus* 17:178-181.
- Benson, J.F.**, Chamberlain, M.J. 2006. Food habits of Louisiana black bears (*Ursus americanus luteolus*) in 2 subpopulations of the Tensas River Basin. *American Midland Naturalist* 156:118-127.
- Benson, J.F.**, Perrine, J.D., Golightly Jr., R.T., Barrett, R.H. 2005. Use of cover and response to cover type edges by female Sierra Nevada red foxes in winter. *Western North American Naturalist* 65:127-130.
- Benson, J.F.**, Chamberlain, M.J., Leopold, B.D. 2004. Land tenure and occupation of vacant home ranges by bobcats (*Lynx rufus*). *Journal of Mammalogy* 85:983-988.

MANUSCRIPTS IN REVIEW

(* Graduate student mentee; *Undergraduate students assisted with data collection)

- Benson, J.F.**, Abernathy, H.N., Sikich, J.A., Riley, S.P.D. 2021 Mountain lions reduce movement, increase efficiency during the Covid-19 shutdown. *Ecological Solutions & Evidence* (In revision)

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Nisi, A.C.*, **Benson, J.F.**, Wilmers, C.C. Unreliable human cues create an ecological trap for a large carnivore. *Ecology* (In Review).

Wood, E.*, Nordeen, T.N., Inselman, W.M., Mahoney, P.J., **Benson, J.F.** Spatial ecology of bighorn sheep in a prairie landscape in Nebraska. *Journal of Wildlife Management* (In Review).

Thompson, C., **Benson, J.F.**, Patterson, B.R. Survey design for building a species distribution model for beaver. *Journal of Wildlife Management* (In Review).

Palumbo, M.D., Petrie, S.A., Schummer, M., Rubin, B.D., **Benson, J.F.** Influence of resource selection on nonbreeding season mortality of mallards. *Journal of Wildlife Management* (In review).

Dougherty, K.*, **Benson, J.F.**, L. Powell, VanWormer, E. Sex-specific resource selection of urban red foxes (*Vulpes vulpes*) in Lincoln, Nebraska. *Urban Ecosystems* (In Review).

Keiter, D.A.*, **Benson, J.F.**, Patterson, B.R. 2021. Gray wolf consumption of American mountain ash berries in winter. *Northeastern Naturalist* (In revision).

Fill, C.T.*, Allen, C.R., Twidwell, D., **Benson, J.F.** Spatial distribution of bat activity in agricultural fields. *Ecology and Society* (In Review)

MANUSCRIPTS IN PREPARATION

Benson, J.F., Mahoney, P.J. et al. Reducing extinction risk in small, isolated carnivore populations. Intended for *Conservation Letters* (analysis complete, drafting manuscript).

Campos, R.*, **Benson, J.F.**, Rio-Maior, H., Nakamura, M., Alvares, F. High anthropogenic mortality in a fully protected large carnivore: survival and causes of wolf mortality in Portugal. Intended for *Biological Conservation* (co-author review prior to submission).

Benson, J.F., & ~100 coauthors. Intrinsic and environmental drivers of cohesion within *Canis* social groups. Intended for *Science Advances*, *PNAS*, or *Ecology Letters* (drafting manuscript).

Patterson, B.R., **Benson, J.F.**, Mills K.M., Loveless, Murray, D.L. Eastern wolf dispersal from Algonquin Provincial Park, Ontario: implications for population expansion in surrounding areas. (Undergoing final revisions prior to submission, intended for *Biological Conservation*).

Benson, J.F., Found, R., B.R. Patterson. Dietary niche overlap between wolves and coyotes in 3-species hybrid zone. Intended for *Ecology* (analysis complete, drafting manuscript).

POPULAR SCIENCE PUBLICATIONS

Benson, J.F. 2018. A Hybrid's Tale. International Wolf Center Magazine (personal encounter).

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Benson, J.F. 2013. A Hybrid's Tale. In *Wild Wolves We Have Known*. D. Thiel and A. Thiel (Editors). International Wolf Center, Ely, MN, USA. (Book Chapter).

TEACHING EXPERIENCE

University Course Instructor/Designer

University of Nebraska-Lincoln

NRES/BIOS 386: *Vertebrate Zoology* (undergraduate)

NRES/BIOS 476/876 *Mammalogy* (undergraduate/graduate)

NRES 891a *Writing in Science* (graduate)

Univ. of California – Los Angeles, Dept. of Ecology and Evolutionary Biology

EEB 297 (graduate seminar): *Analysis and Modeling for Wildlife Ecology*

EEB 297 (graduate seminar): *Predator-Prey Dynamics*

Workshop Developer & Teacher --- *Known-fate Survival & Competing Risks Modeling in R*

1) Technical workshop for 30 students at Wildlife Society Conference (Oct. 2015)

2) Contracted by Colorado Parks & Wildlife to teach technical workshop (Feb. 2016)

- I co-designed & co-taught this workshop with one other person

Graduate Teaching Assistant --- Environmental Science Program, Trent University

ERSC 1010H: Introduction to Environmental Science-Global Issues

ERSC 1020H: Introduction to Environmental Science-Canadian Issues

- Teaching assistant for 6 semesters (September 2007-April 2011)

GRADUATE STUDENTS ADVISED

Current:

Hunter Ellsworth (Ph.D., University of Nebraska – Lincoln)

Kyle Dougherty (Ph.D., University of Nebraska – Lincoln)

Maria Petridou (Ph.D., co-advised at Department of Biological Applications and Technology, University of Ioannina, Greece)

Ellie Bolas (Ph.D., co-advised at Fish, Wildlife, and Conservation Biology Department at UC-Davis)

Graduated:

Erin Wood M.S. Thesis (2020): Space use and resource selection of bighorn sheep ewes in a prairie badlands population

Rafael Campos M.S. Thesis (2018): Survival and Population Dynamics of the Iberian Wolf in Portugal (co-advised at CIBIO-inBIO, University of Porto, Porto, Portugal)

POSTDOCTORAL SCHOLARS MENTORED

Peter Mahoney, Jul 2019 – Aug 2020; Current position: Research Wildlife Biologist with NOAA

GRADUATE STUDENT COMMITTEE SERVICE

Completed: (UNL [3]): Kyle Dougherty (MS), Hugh Ellerman (MS), Chris Fill (MS)
Current (Non-UNL [4]): Connor Thompson (PhD, Trent University), Daniel Crawford (PhD, Virginia Tech), Anna Nisi (PhD, UC Santa Cruz), Mariah Ward (MS, Trent University)

UNIVERSITY COMMITTEE SERVICE

SNR seminar committee (member 2017-2020; chair 2021- current)
SNR Graduate committee (2019 – current)
SNR Graduate Curriculum (Applied Ecology) committee (2021 – current)
Nebraska Cooperative Fish & Wildlife Research Unit Search Committee – Assistant Unit Leader
– Wildlife Scientist (Successful hire, 2020)

RESEARCH FUNDING

Benson, J.F. 2021-2028. Elk Resource Selection, Movement, Survival, and Population Dynamics in Western Nebraska. Nebraska Game & Parks Commission (**\$831,942**; approved and pending).

Benson, J.F., Mahoney, P.J. 2020-21. Integrated population model for Nevada mountain lions. Nevada Department of Wildlife (**\$10,000 accepted via UNL**).

Benson, J.F., Keiter, D.A., Rodgers, A.R., Patterson, B.R. 2018-2020. Evaluating the Persistence of an Island Population of Boreal Woodland Caribou in the Presence of Wolves and Alternative Prey. SARRFO Grant, Ontario Ministry of Natural Resources & Forestry (**\$60,000 accepted via Trent University**)

Benson, J.F. 2017-2024. Factors limiting mule deer populations in Nebraska. Nebraska Game and Parks Commission (**\$1,489,420 accepted via UNL**)

Benson, J.F. 2017-2020. Spatial ecology of bighorn sheep in Nebraska. Nebraska Game and Parks Commission (**\$280,740 accepted via UNL**)

Benson, J.F., P.J. Mahoney, L.Y. Rutledge, C. Thompson, B.R. Patterson. 2017-2019. A Spatially-Explicit Model of Population Viability and Hybridization Dynamics for Algonquin Wolves Relative to Harvest Management Strategies Outside of Algonquin Park. SARRFO Grant, Ontario Ministry of Natural Resources and Forestry (**\$57,680, Accepted via Trent University**)

Benson, J.F. 2014-15. Population viability of mountain lions in the Santa Monica Mountains: demography, genetic variation, and habitat connectivity in a highly fragmented landscape. National Park Service-UCLA La Kretz Center Postdoctoral Research Fellowship (**\$94,000**).

Benson, J.F. 2011. Hybridization Dynamics between Wolves and Coyotes in Ontario. Wildlife Conservation Society-Canada/W.Garfield Weston Fellowship (**\$8,170**)

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Benson, J.F., D. Murray, B. Patterson. 2010. Survival and Cause-Specific Mortality in and Around Algonquin Provincial Park. Ontario Ministry of Natural Resources Species at Risk Grant (\$10,000)

Benson, J.F., D. Murray. 2009. Hybridization Dynamics between Eastern Wolves and Coyotes in Central Ontario. World Wildlife Fund - SARRFO Fund Grant (\$40,000)

D. Onorato, **Benson, J.F (Co-PIs)**. 2006. Habitat Selection of Florida Panthers in Everglades National Park. National Park Service Grant (\$12,000)

Benson J.F., M. Chamberlain. 2004. Genetic Relatedness of Louisiana Black Bears in the Tensas River Basin Population. Johnston Science Foundation Grant (\$5,000).

AWARDS & SCHOLARSHIPS

Ph.D. Fellowship in the S.J. & J.E. Quinney College of Natural Resources, Utah State University, 2007 (\$80,000, *declined*)

Excellence Award for Outstanding M.S. Student, School of Renewable Natural Resources, Louisiana State University, 2005 (\$500)

Outstanding Undergraduate Wildlife Student of the Year, Wildlife Department, Humboldt State University, 2001

NSERC Vanier Scholarship Nominee from Trent University 2008, I was nominated as the single Ph.D. student from Trent University to compete in the National Competition.

French-American Scholarship (Merit Based), ENLS, Trent University 2012 (\$2,500)

Membership in Phi Kappa Phi Honor Society 1998-2001

Mark P. Bush Scholarship (Merit-based), Wildlife Dept., Humboldt State Univ., 2001 (\$2000)

Joan E. Brenson Scholarship (Merit-based), Wildlife Dept, Humboldt State Univ., 2000 (\$450)

SELECTED CONFERENCE PRESENTATIONS

(* UNL graduate student in my lab; *Graduate Student Mentee)

Ellsworth, W.H.*, W.M. Inselman, **J.F. Benson**. 2021. Seasonal Space Use, Movements, and Mortality of Mule Deer in Western Nebraska. Nebraska Wildlife Society, Virtual (Oral).

Benson, J.F., E. Wood*, T. Nordeen, P. Mahoney, W. Inselman. 2021. Spatial Ecology of bighorn sheep ewes in the prairie badlands of Nebraska. Nebraska Wildlife Society, Virtual (Oral).

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Benson, J.F., Sikich, J.A., S.P.D. Riley. 2020. Survival and competing mortality risks of mountain lions in greater Los Angeles. Wildlife Society, Virtual (Oral presentation).

Benson, J.F., Mahoney, P.J., Thompson, C.*, Rutledge, L.R., Fryxell, J.M., Patterson, B.R. 2019. Survival and mortality risk in a Canis hybrid zone. Wildlife Society, Reno (Oral presentation)

Wood*, E., Nordeen, T., **Benson J.F.** 2019. Spatial ecology of bighorn sheep in Nebraska. Wildlife Society, Reno (Oral presentation).

Nisi, A*, **Benson, J.F.**, Wilmers, C. 2019. Spatial and behavioral predictors of mortality risk for a large carnivore in a human-dominated landscape. Wildlife Society, Reno (Oral Presentation)

Thompson, C*., **Benson, J.F.**, Patterson, B. 2019. Using Step Selection Analysis to Identify Movement Corridors for Eastern Wolves. Wildlife Society, Reno (Poster)

Keiter, D.A.*, **Benson, J.F.**, Rodgers, A.R., Patterson, B.R. 2019. Human shield or ecological trap? Anthropogenic effects on caribou in an island ecosystem. Wildlife Society, Reno (Poster)

Benson, J.F., *Oliveira, T., Thompson, C., Patterson, B.R. 2019. Resource selection at den and rendezvous sites in a wolf-coyote hybrid zone. American Society of Mammalogists, Washington D.C. (Oral Presentation).

Benson, J.F., Sikich, J.A., S.P.D. Riley. 2019. Survival and competing mortality risks of mountain lions in a major metropolitan area. International Urban Wildlife Conference, Portland (Oral presentation).

Benson, J.F., Mahoney, P.J., Wickers, T. W. et al. 2018. Extinction vortex dynamics of top predators isolated by urbanization. Wildlife Society, Cleveland (Oral presentation)

Benson, J.F., Found, R., B.R. Patterson. 2018. Dietary niche overlap between wolves, coyotes, and hybrids in 3-species hybrid zone. International Wolf Symposium, Minneapolis, MN (Oral presentation)

*Keiter, D.A., **Benson, J.F.**, Rodgers, A.R., Patterson, B.R. 2018. Do novel scavenging opportunities or risk of interspecific killing by wolves influence occupancy and activity patterns of smaller carnivores? International Wolf Symposium, Minneapolis, MN (Poster)

*Keiter, D.A., **Benson, J.F.**, Rodgers, A.R., Patterson, B.R. 2018. Can a Large Carnivore Subsist on an Abundant, but Seasonally Available Prey Species? Wildlife Society, Cleveland, OH (Poster)

Benson, J.F., J.A. Sikich, D. Fraser, R. K. Wayne, H. B. Ernest, S.P.D. Riley. 2017. Too close for comfort? Inbreeding dynamics in a small, isolated mountain lion population. Wildlife Society, Albuquerque, NM (Oral presentation)

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Benson, J.F., J.A. Sikich, S.P.D. Riley. 2017. Where do mountain lions kill deer in the greater Los Angeles area? International Urban Wildlife Conference, San Diego, CA (Oral presentation).

Benson, J.F., P.J. Mahoney, J.A. Sikich, L.E.K. Serieys, J. P. Pollinger, H. B. Ernest, S.P.D. Riley. 2017. Interactions between demography, genetics, and landscape connectivity increase extinction probability for a small mountain lion population in a major metropolitan area. 12 Mountain Lion Workshop, Estes Park, CO (Oral presentation)

Benson, J.F., P.J. Mahoney, J.A. Sikich, L.E.K. Serieys, J. P. Pollinger, H. B. Ernest, S.P.D. Riley. 2016. Interactions between demography, genetics, and landscape connectivity for a small population of large carnivores in a major metropolitan area. Wildlife Society, Raleigh, NC (*Invited* Oral Presentation).

Benson, J.F., K.M., Loveless, L.Y. Rutledge, B.R. Patterson. 2016. Ungulate predation and ecological roles of canid top predators in eastern North America. Wildlife Society, Raleigh, NC (Oral Presentation).

Benson, J.F., P.J. Mahoney, J.A. Sikich, L.E.K. Serieys, J. P. Pollinger, H. B. Ernest, S.P.D. Riley. 2015. Into the vortex: demography and genetics interact to elevate extinction risk for urban top predators. Wildlife Society Colorado Chapter (Oral Presentation).

Benson, J.F., J.A. Sikich, S.P.D. Riley. 2015. Where do mountain lions kill deer along the urban-wildland interface? Predator-Prey Interactions, GRC Conference, Ventura, CA (Poster)

Benson, J.F., P.J. Mahoney, J.A. Sikich, L.E.K. Serieys, J. P. Pollinger, R. K. Wayne H. B. Ernest, S.P.D. Riley. 2015. Synergistic demographic and genetic influences on population viability of mountain lions in a fragmented landscape. Wildlife Society, Winnipeg, MB (Oral Presentation).

Benson, J.F., P.J. Mahoney, J.A. Sikich, L.E.K. Serieys, J. P. Pollinger, R. K. Wayne, H. B. Ernest, S.P.D. Riley. 2015. Modeling population viability and inbreeding dynamics of a small, isolated mountain lion population adjacent to Los Angeles. International Urban Wildlife Conference, Chicago, IL (Oral Presentation).

Benson, J.F., B.R. Patterson. 2014. Hybridization dynamics between wolves and coyotes in Ontario, Canada. International Conference on Hybridization between Wild and Domestic Mammals as Conservation Threat and Opportunity, Grosseto, Italy (*Invited* Oral Presentation, guest of the European Union).

Benson, J.F., B.R. Patterson. 2014. Territoriality and ungulate predation by sympatric eastern coyotes, eastern wolves, and wolf-coyote hybrids. Symposium: Ecology and Management of Coyotes in Eastern North America, Wildlife Society, Pittsburgh, PA (*Invited* Oral Presentation).

Benson, J.F., B.R. Patterson. 2014. Hybridization dynamics between wolves and coyotes in Ontario: implications for recovery of wolves in the Northeastern United States. Northeast Wolf Coalition Conference, Lincoln, MA (*Invited* Oral Presentation).

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Benson, J.F., P.J. Mahoney, B.R. Patterson. 2014. Are functional responses to human disturbance adaptive? Spatiotemporal variation in selection of roads influences mortality risk of canids in a 3-species hybrid zone. The Wildlife Society, Pittsburgh, PA (Poster).

Benson, J.F., K.J. Mills, P.J. Mahoney, B.R. Patterson. 2014. Resource selection of canids in central Ontario: behavioral responses to roads and selection of den and rendezvous sites. Mid-West Wolf Stewards Annual Meeting, Sault Ste. Marie, Ontario (via Skype, *Invited*).

Prugh, L.R., R.D. Boertje, D.D. Young, M.E. McNay, G.L. Gardner, K.A. Kellie, M.A. Keech, P. Valkenburg, C.T. Seaton, **J.F. Benson**. 2014. Escape from the predator pit: 30 years of high wolf and moose densities following wolf control in interior Alaska. Ecological Society of America, Annual Meeting, Sacramento, CA (*Invited* Oral Presentation).

Benson, J.F. 2014. Predator-prey dynamics between moose, wolves, and bears in Interior Alaska. Predator-Prey Interactions, GRC Conference, Ventura, CA (Poster).

Benson, J.F., B.R. Patterson. 2013. Interspecific territoriality and spatial segregation in a *Canis* hybrid zone. International Wolf Symposium, Duluth, MN (Oral).

Benson, J.F., B.R. Patterson, T.J. Wheeldon. 2012. Spatial genetic structure, morphology and landscape associations in a *Canis* hybrid zone. The Wildlife Society, Portland, OR, (Oral).

Benson, J.F. and B.R. Patterson. 2012. Genotype-specific survival of wolves and coyotes in a 3-species hybrid zone. 2012. American Society of Mammalogists, Reno, Nevada (Oral)

Benson, J.F., T.J. Wheeldon, B.R. Patterson. 2012. Spatial genetic structure, morphology and landscape associations in a *Canis* hybrid zone. Wolf and Carnivore Conference, Thompson, Manitoba, (via Skype, *Invited*).

Benson, J.F., J. H. Hostetler, D P. Onorato, E.D. Land, W. E. Johnson, M. K. Oli. 2009. Influence of genetic introgression on survival and cause-specific mortality of adult and sub-adult Florida panthers. The Wildlife Society, Monterey, California (Oral).

Benson, J.F. 2006. Den site selection by female Florida Panthers. American Society of Mammalogists, Amherst, MA. (Oral).

Benson, J.F., M.J. Chamberlain. 2005. Influence of landscape and reproductive status on space use of Louisiana black bears. American Society of Mammalogists, Springfield, MO (Oral).

Benson, J.F., M.J. Chamberlain. 2004. Space-use and movement patterns of reintroduced Louisiana black bears. The Wildlife Society, Calgary, Canada (Oral)

Benson, J.F., M.J. Chamberlain, B.D. Leopold. 2004. Land tenure and home range replacement in bobcats. The Wildlife Society, Calgary, Canada (Poster)

Benson, J.F., M.J. Chamberlain. 2004. Genetic relatedness of Louisiana black bears in the Tensas River basin population. ESOS Conference IX, New Orleans, LA, October, 2004 (Poster).

SELECTED INVITED UNIVERSITY SEMINARS

Benson, J.F. 2021. Social behavior, spatial ecology, and population dynamics of top predators. Ecology, Evolution, and Behavior Seminar, Department of Biological Sciences. Virginia Tech.

Benson, J.F. 2020. Social behavior, spatial ecology, and population dynamics of top predators. School of Natural Resources, University of Nebraska.

Benson, J.F. 2018. Dynamics and conservation of small populations of large carnivores. Department of Biological Sciences, University of Nebraska.

Benson, J.F. 2017. Dynamics and Conservation of Small Populations of Large Carnivores. CIBIO-InBIO (Research Institute and Graduate Studies), University of Porto, Portugal.

Benson, J.F. 2016. Wildlife Ecology in a Changing World: Linking Demography, Behavior, Genetics, and Landscapes. University of Missouri.

Benson, J.F. 2016. Wildlife Ecology for a Changing World: Linking Demography, Behavior, Genetics, and Landscapes. University of Nebraska-Lincoln.

Benson, J.F. 2015. Wildlife Ecology for a Changing World: Linking Habitat Relationships, Individual Fitness, and Population Dynamics. Quantitative Wildlife Ecology Seminar, University of California, Davis.

Benson, J.F. 2015. Conservation of Small Populations of Large Mammals. Education for Sustainable Living Lecture Series, Institute of the Environment and Sustainability, University of California, Los Angeles.

Benson, J.F. 2015. Integrative Wildlife Ecology: Linking Habitat Relationships, Individual Fitness, and Population Dynamics. Wildlife Ecology Seminar, University of Maine, Orono.

Benson, J.F., B.R. Patterson. 2013. Hybridization Dynamics between Wolves and Coyotes. Life Sciences Seminar, Institute of Arctic Biology, University of Alaska, Fairbanks.
Watch presentation here: http://media.iab.uaf.edu/2013-10-18_LSSS_Benson/2013-10-18_LSSS_Benson_files/play_echo360.html

SELECTED GUEST LECTURES FOR UNIVERSITY COURSES

“Hybridization Dynamics between Wolves and Coyotes”, in *Philosophy and Wildlife*, Program for Animal-Human Interactions, University of Redlands, Fall 2017.

“Using Molecular Approaches to Address Questions in Ecology and Conservation” in *Ecology*, Department of Biology, Pepperdine University. Fall 2015.

“Conservation of Large Carnivores in Human-Altered Landscapes” in *Conservation of Biodiversity*, Department of Ecology and Evolutionary Biology, UCLA. Spring 2015.

GOVERNMENT REPORTS

Benson, J.F., and K.M. Loveless. 2010. A Management plan for the Eastern Wolf (*Canis lupus lycaon*) in Canada. *Species at Risk Act* management plan series, contracted by federal government of Canada. SARA responsible agency, Ottawa, Canada.

Benson, J.F., M. Cunningham, D. Land, M. Lotz, and D. Onorato. 2006. Annual Report on the Research and Management of Florida Panthers: 2005-2006. Florida Fish and Wildlife Conservation Commission, Naples, Florida, USA.

Benson, J.F., and D. Onorato. 2006. Effects of Habitat Type and Collar Position on Performance of GPS Radiocollars. Florida Fish and Wildlife Commission, Naples, Florida, USA.

SCIENTIFIC SERVICE

Regular technical reviewer: Ecology, Journal of Animal Ecology, Proceedings of Royal Society B, Ecography, American Naturalist, Molecular Ecology, Animal Behaviour, Journal of Wildlife Management, Scientific Reports, Journal of Mammalogy, Bioscience, Ecosphere, Biological Conservation, Journal of Heredity, PLOS-ONE, Ethology, Canadian Journal of Zoology, Ecology and Evolution, Wildlife Biology, Environmental Research Letters, Urban Ecosystems, Mammalia, Mammalian Biology, Journal of Natural History, Current Zoology, Arctic, European Journal of Wildlife Research, Wildlife Research and Management, Human-Wildlife Conflicts, Southwestern Naturalist, Canadian Field Naturalist, Mammal Study, Environmental Conservation, Science & Technology (Biodiversity Management & Forestry), Animals, Sage-Open

Peer reviewer, Species Status Assessment (Red Wolves). 2017. US Fish & Wildlife Service.

Scientific advisor, Ontario Provincial Recovery Strategy for Algonquin wolf (threatened). 2016-2017.

Contributed papers session moderator. 2019. Wildlife Society International Conference.

Contributed papers session moderator. 2015. Wildlife Society International Conference.

Contributed papers abstract reviewer. 2015. Wildlife Society International Conference.

EARLIER PROFESSIONAL EXPERIENCE

Scientific Technician --- January 2002-April 2002
University of Maine Lynx Project, Orono, ME

- Radio-telemetry, lynx snow tracking, vegetation sampling, data entry

Wildlife Biologist --- October 2001- December 2001

John F. Benson C.V.

- Polar Bear Project, United States Geological Survey, Anchorage, AK
- Polar bear capture, aerial telemetry, processing of biological samples, data entry
- Wildlife Biologist** --- May 2001-August 2001
Sea Duck Project, United States Geological Survey, Anchorage, AK
- Duck capture, nest searching, telemetry, lived in tent in remote roadless areas in Alaska
- Field Technician** --- April 2001-May 2001
Redwood National Park Mountain Lion Project, Humboldt State University, Arcata, CA
- Located mountain lions with ground-based radio telemetry
- Field Technician** --- December 2000-January 2001
UC Berkeley-Lassen Carnivore Research Project, Mineral, CA
- Ground-based radio telemetry, scat and prey remains collection, and snow tracking
- Field Technician** --- May 2000-August 2000
Sea Bird Project, University of California, Berkeley, Berkeley, CA
- Bird surveys on Pacific Ocean by boat, collecting sonar data, data entry
- Wildlife Biologist** --- May 1999-August 1999
Marbled Murrelet Project, Natural Resources Management Corporation, Eureka, CA
- Bird surveys, worked alone and lived in tent for 10 days at a time

SELECTED MEDIA COVERAGE

LA. Times, Huffington Post, US News & World Report, ABC, NBC, KQED (NPR) 2019-2020
Print, TV, Radio, Web interviews & stories about our Mountain Lion Research in Southern CA.

What's Killing the West Coast's Young Great White Sharks? 2018. **National Geographic** web article about our Pacific white shark research.

White Shark Researchers Tap Data from Electronic Tags to Gain Insights into Survival Rates. 2018. **Science Daily** article about our white Shark research in California and Mexico.

Southern California Public Radio (KPCC). 2016 news interview and podcast about our population viability modeling with mountain lions in the Santa Monica Mountains
<http://www.scpr.org/news/2016/08/30/64132/will-the-mountain-lions-of-the-santa-monica-mounta/>

CBS News Radio Los Angeles (KNX). 2016 news interview about our population viability model for mountain lions in the Santa Monica Mountains.

LA Times, LA Daily News, LA Weekly, the Atlantic and other outlets. 2016. All ran stories on our population viability modeling of mountain lions in the Santa Monica Mountains

John F. Benson C.V.

Take-Two, Southern California Public Radio (KPCC). 2016. Live NPR radio interview about my research with mountain lions in the Los Angeles Area.

http://media.scpr.org/audio/upload/2016/07/18/SHOW_0718-26b05f0c.mp3?uuid=e6c7eda7-035e-47db-b003-62f01e54f2fb (mountain lion segment at 68:08:30)

To avoid conflict, LA mountain lions choose separate hunting grounds. 2016. **LA Times** article on our paper about mountain lion predation on deer, print (Sunday edition) and online.

Meet the Coywolf (Documentary). 2013-14. **PBS-Nature & Canadian Broadcasting Company**
View online: <http://video.pbs.org/video/2365159966/> (see 11:45, 14:25, 15:15)

Canadian Broadcasting Company (CBC) Radio One. 2013. Radio interview on prime-time national news about my eastern coyote-moose predation study.

Wolf-Coyote Hybrid. 2011. **Discovery Channel** prime-time TV feature on my PhD research.

Wolves in Coyote Clothing. 2011. **Canadian Wildlife Magazine**. Feature article, PhD research.

Bears on the Move. 2005. **Turner South Broadcasting**. TV documentary about bears in Louisiana featuring footage of my fieldwork and interviews about my research