



2023 Presentation and Publication Report



Indicates **East Foundation Graduate Student** and **East Foundation Employee**.
Many publications referenced in this report are available for your review at <https://eastfoundation.net/>.



Fewer than 80 recorded ocelots live in the United States and most of these live on private ranches in South Texas. Together with our research partners, East Foundation collects data on ocelot population size, survival and mortality, movements and activity, prey abundance and food habits, habitat use, and competition with other carnivores to help solidify recovery strategies.

Refereed Articles, Book Chapters, Proceedings, and Management Bulletins

Arnold, A.N., **J.E. Sawyer**, and K.B. Gehring. 2023. Longitudinal evaluation of Salmonella in environmental components and peripheral lymph nodes of fed cattle from weaning to finish in three distinct feeding locations. *Journal of Food Protection* 86:100062. <https://doi.org/10.1016/j.jfp.2023.100062>

Baumgardt, J.A., A.M. Foley, K.M. Sliwa, R.W. DeYoung, J.A. Ortega-S., D.G. Hewitt, **T.A. Campbell**, J.A. Goolsby, and K.H. Lohmeyer. 2023. Effects of helicopter net gunning on the survival and movement behavior of nilgai antelope. *Wildlife Research* <https://doi.org/10.1071/WR22049> (East Foundation Manuscript 077)

Daigle, C.L., **J.E. Sawyer**, R.F. Cooke, and J.S. Jennings. 2023. Consider the source: The impact of social mixing on drylot housed steer behavior and productivity. *Animals* 13:2981. <https://doi.org/10.3390/ani13182981>

Foley, A.M., R.W. DeYoung, and D.G. Hewitt. 2023. Error in demographic ratios from aerial surveys of white-tailed deer in semi-arid rangelands. *Journal of Wildlife Management* <https://doi.org/10.1002/jwmg.22413> (East Foundation Manuscript 085)

Fulbright, T.E., J.A. Ortega-S., **S.L. Hines**, **D.J. Drabek**, **R. Saenz, III**, **T.A. Campbell**, D.G. Hewitt, and D.B. Wester. 2023. Relationship between plant species richness and grazing intensity in a semiarid ecosystem. *Ecology and Evolution* <https://doi.org/10.1002/ece3.10668> (East Foundation Manuscript 089)

Haynes, V.L., **J.S. Avila-Sanchez**, J.A. Ortega-S., **T.A. Campbell**, **J.A. Ortega-S., Jr.**, S. Rideout-Hanzak, D.B. Wester. 2023. Patch burning improves nutritional quality of two Gulf Coast grasses-and winter burning is better than summer burning. *Fire* 6, 105. <https://doi.org/10.3390/fire6030105>. (East Foundation Manuscript 058)

Herschberger, J.E., S.T. Rainey, F. Hernández, K.G. Stewart, **A. Montalvo**, and L.K. Howard. 2023. Exploring a plant-diversity hypothesis to explain helminth prevalence in Northern Bobwhite (*Colinus virginianus*) in Texas. *Journal of Wildlife Diseases* 59:651-661. (East Foundation Manuscript 106)

Lauriault, L.M., E.J. Scholljegerdes, and **J.E. Sawyer**. 2023. Stocking density influences predominantly blue grama pasture mass and animal performance. *Grasses* 2:142-155. <https://doi.org/10.3390/grasses2030012>

Leivers, S.J., **T.A. Campbell**, M.J. Bodenчук, and J.M. Tomecek. 2023. Behavior of wild pigs towards conspecific carcasses: implications for disease transmission in a hot, semi-arid climate. *Transboundary and Emerging Diseases* <https://doi.org/10.1155/2023/4195199>. (East Foundation Manuscript 092)

Montalvo, A.B., and **D.A. Woodard**. 2023. South Texas bobwhites and eyeworms: Regional history, prevalence, and implications for management. *East Foundation Management Bulletin* No. 9, 6p.

Ocelot Reintroduction Study, Captive Propagation Team (including, A. Caso, **A. Reeves**, C. Hilton, F. Najera, G. Harris, J. Janecka, J. Vartanian, **J.V. Lombardi**, K. Kaemmerer, L. De La Garza, L. Martinez, L. Petracca, M. Tewes, S. Lehnen, **T.A. Campbell**, and W. Swanson). Manual for ocelot (*Leopardus pardalis*) breeding and reintroduction for recovery in the United States <https://recovertexasocelots.org/manual-for-breeding-and-reintroduction>

Rankins, S.T., R.W. DeYoung, A.M. Foley, J.A. Ortega-S., T.E. Fulbright, D.G. Hewitt, L.R. Schofield, and **T.A. Campbell**. 2023. Ecogeographic variation in physical traits of white-tailed deer. *Rangeland Ecology and Management* 87:185–197. <https://doi.org/10.1016/j.rama.2023.01.005> (East Foundation Manuscript 078)

Rankins, S.T., R.W. DeYoung, A.M. Foley, J.A. Ortega-S., T.E. Fulbright, D.G. Hewitt, **L.R. Schofield**, and **T.A. Campbell**. 2023. Regional copper deficiency in white-tailed deer. *Open Journal of Ecology* 13:9–21. <https://doi.org/10.4236/oje.2023.131002> (East Foundation Manuscript 064)

Sergeyev, M., M.J. Cherry, E.P. Tanner, **J.V. Lombardi**, M.E. Tewes, and **T.A. Campbell**. 2023. Multiscale assessment of habitat selection and avoidance of sympatric carnivores by the endangered ocelot. *Scientific Reports* <https://doi.org/10.1038/s41598-023-35271-9> (East Foundation Manuscript 091)

Sergeyev, M., D.A. Crawford, J.D. Holbrook, **J.V. Lombardi**, M.E. Tewes, and **T.A. Campbell**. 2023. Selection in the 3rd dimension: Using LiDAR to assess individual and population level habitat partitioning of ocelots, bobcats, and coyotes. *Remote Sensing in Ecology and Conservation* <https://zslpublications.onlinelibrary.wiley.com/doi/epdf/10.1002/rse2.369>. (East Foundation Manuscript 087)

Sergeyev, M., **J.V. Lombardi**, M.E. Tewes, and **T.A. Campbell**. 2023. Ocelots in the moonlight: Influence of lunar phase on habitat selection and movement of two sympatric felids. *PLoS ONE* 18:e0286393. <https://doi.org/10.1371/journal.pone.0286393> (East Foundation Manuscript 098)

Sergeyev, M., E.P. Tanner, M.J. Cherry, **J.V. Lombardi**, M.E. Tewes, and **T.A. Campbell**. 2023. Influence of abiotic factors on habitat selection of sympatric ocelots and bobcats: testing the interactive range limit theory. *Frontiers in Ecology and Evolution* 11:1166184. <https://doi.org/10.3389/fevo.2023.1166184> (East Foundation Manuscript 094)

Slifka, D.E., A.A.T. Conkey, L.A. Brennan, H.L. Perotto-Baldivieso, F. Hernández, **J.L. Ortiz**, **M.L. Lipschutz**, **A. Montalvo**, and T. Langschied. 2022. Ten-year population trends of land birds on three East Foundation ranches in South Texas. *Bulletin of the Texas Ornithological Society* 55:1–106. (East Foundation Manuscript 104)

Zerlin, R.R., J.C. Elissetche, **T.A. Campbell**, R.J. Patrock, D.B. Wester, and S. Rideout-Hanzack. 2023. Extreme weather impacts on butterfly populations in southern Texas, USA. *Journal of Insect Conservation* <https://doi.org/10.1007/s10841-023-00525-4> (East Foundation Manuscript 093)

Selected Presentations

Texas Chapter of The Wildlife Society, Houston, February 2023

Barham, M., D. Walkup, and C. Boal. Microclimate characteristics of white-tailed hawk nests in South Texas.

Bazaldua, A., F. Hernandez, **A. Montalvo**, A.M. Foley, K. Stewart, and S. Szeto. Forecasting spatial abundance of Northern Bobwhite in South Texas using roadside surveys.

Berry, C., **A. Woodard**, A. Montemayor, **A. Tautges**, and C. Bright. Northern Bobwhite covey locations on fed and unfed ranches in South Texas.

Bright, C., **A. Woodard**, **A. Montalvo**, C. Berry, A. Montemayor, and **A. Tautges**. Monitoring the prevalence of eyeworms in South Texas bobwhites.

Elissetche, J., **F. Fay**, S. Rideout-Hanzak, D.B. Wester, S.E. Henke, H. Perotto, E. Tanner, M. Anderson, C. Eversole, and J. Singhurst. Evaluation of South Texas Clay Loma characteristics.

Fay, F., S. Rideout-Hanzak, J. Elissetche, D.B. Wester, M. Anderson. How are herbaceous plant relationships affected by prescribed fire?

Hopper, M.L., **B.D. Spencer**, R.W. DeYoung, A.M. Foley, J.A. Ortega-S., **L.R. Schofield**, **T.A. Campbell**, and M.J. Cherry. Temporal variation in resources influences offspring quality of white-tailed deer in a semi-arid environment.

Kiel, C., E. Tanner, A. Tanner, S. Rideout-Hanzak, M. Morrison, and **A. Montalvo**. Texas tortoise response to prescribed fire in South Texas coastal rangelands.

Leivers, S., **T.A. Campbell**, M.J. Bodenchuk, and J. Tomeček. Behavior of wild pigs towards conspecific carcasses: Implications for disease transmission in a hot, semi-arid climate.

Montemayor, A., **A. Woodard**, C. Berry, **A. Tautges**, and C. Bright. Environmental conditions and the efficiency of Northern Bobwhite hunts in South Texas.

Moon, G., D. Walkup, C. Boal, and **M. Barham**. Parental budgets and feeding behavior of nestling white-tailed hawks.

Perez, K. Vegetation selection and activity patterns by South Texas bats.

Racey, A., **T.A. Campbell**, and J. Tomeček. Understanding the diet of an unmanaged population of coyotes in southern Texas.

Sinner, M. Fire and mice: The effects of prescribed fire on rodent communities.

Sloan, H., J. Tomeček, and **T.A. Campbell**. Species-specific patterns of consumption of oral rabies vaccine baits in the South Texas plains.

Spencer, B.D., M.L. Hopper, R.W. DeYoung, A.M. Foley, D.G. Hewitt, J.A. Ortega-S., **L.R. Schofield, T.A. Campbell**, and M.J. Cherry. White-tailed deer and cattle grazing - nutritional consequences for deer population performance.

Tautges, A., A. Woodard, C. Berry, A. Montemayor, and C. Bright. Correlating density surface models with trapping success of Northern Bobwhites.

Woodard, A., L. Brennan, F. Hernandez, H. Perotto, **R.N. Wilkins**, and **A. Montalvo**. Distributional responses of Northern Bobwhites to hunting pressure in South Texas.

Yamashita, T., D. Wester, Z. Wardle, D. Scognamillo, **L.R. Schofield**, J. Young, and **J.V. Lombardi**. Influence of traffic volume on the variation in the mammal community composition within road effect zone.

Society for Range Management, Boise, ID, February 2023

Hernandez, F., **A. Montalvo**, D.B. Wester, A. Bazaldula, and **J.E. Sawyer**. Evaluating the insurance hypothesis: Biodiversity and rangeland productivity in a variable environment.

Schofield, L.R. and **J.E. Sawyer**. Acute effects of fire on soil carbon.

Southeast Deer Study Group, Baton Rouge, LA, February 2023

Hopper, M.L., B.D. Spencer, R.W. DeYoung, A.M. Foley, J.A. Ortega-S., **L.R. Schofield, T.A. Campbell**, and M.J. Cherry. Temporal variation in resources influences offspring quality of white-tailed deer in a semi-arid environment.

Schofield, L.R., M.J. Cherry, R.W. DeYoung, A.M. Foley, J.A. Ortega-S., D.G. Hewitt, C. Hilton, and **T.A. Campbell**. Training future leaders in conservation while furthering our understanding of white-tailed deer biology.

Spencer, D.B., M.L. Hopper, R.W. DeYoung, A.M. Foley, D.G. Hewitt, J.A. Ortega-S., **L.R. Schofield, T.A. Campbell**, and M. J. Cherry. White-tailed deer and cattle grazing - Consequences for deer nutrition.

Texas Society of Mammalogists, Junction, February 2023

Yamashita, T.J., D.B. Wester, Z.M. Wardle, D.G. Scognamillo, **L.R. Schofield**, M.E. Tewes, J.H. Young, Jr., and **J.V. Lombardi**. Influence of traffic volume on the variation in the mammal community composition within the road effect zone.

American Society of Mammalogists, Anchorage, AK, July 2023

Hopper, M.L., B.D. Spencer, R.W. DeYoung, A.M. Foley, J.A. Ortega-S., T.E. Fulbright, D.G. Hewitt, **L.R. Schofield, T.A. Campbell**, and M.J. Cherry. Timing of rainfall influences offspring quality of a large herbivore in a semi-arid environment.

Western Association of Fish and Wildlife Agencies, Flagstaff, AZ, July 2023

Hopper, M.L., B.D. Spencer, R.W. DeYoung, A.M. Foley, J.A. Ortega-S., T.E. Fulbright, D.G. Hewitt, **L.R. Schofield, T.A. Campbell**, and M.J. Cherry. Temporal variation in resources influences offspring quality of white-tailed deer in a semi-arid environment.

Felid Taxon Advisory Group Meeting, Columbus, OH, July 2023

Reeves, A.M. Getting serious about ocelot recovery in the United States.

Wildlife Disease Association Annual Meeting, Athens, GA, July–August 2023

Reeves, A.M., W. Swanson, C. Hilton, M. Tewes, **T.A. Campbell, L.R. Schofield**, N. Szafranski, R. Gerhold, and D.L. Miller. Assessment of health status and pathogen prevalence in free-ranging ocelot (*Leopardus pardalis*) and bobcat (*Lynx rufus*) populations of southern Texas.

Southeastern Association of Fish and Wildlife Agencies, Corpus Christi, TX, October 2023

Lovasik, K.T., M.L. Hopper, B.D. Spencer, R.W. DeYoung, A.M. Foley, J.A. Ortega-S., D.G. Hewitt, **L.R. Schofield, T.A. Campbell**, and M.J. Cherry. Survival and recruitment of white-tailed deer fawns in South Texas.

The Wildlife Society, Louisville, KY, November 2023

Bostwick, T., R.W. DeYoung, A. Martin, **A. Reeves**, and L. Petracca. Informing recovery: Current genetic status of isolated ocelot populations in South Texas.

Hediger, J.A., **B.D. Spencer, M.F. Rice, M.L. Hopper**, R.W. DeYoung, J.A. Ortega-S., T.E. Fulbright, D.G. Hewitt, A.M. Foley, **L.R. Schofield, T.A. Campbell**, M.J. Sheriff, and M.J. Cherry. Physiological carry-over effects of drought are mediated by reproductive status in a long-lived ungulate.

Lovasik, K.T., M.L. Hopper, B.D. Spencer, R.W. DeYoung, A.M. Foley, J.A. Ortega-S., D.G. Hewitt, **L.R. Schofield, T.A. Campbell**, and M.J. Cherry. Survival and recruitment of white-tailed deer fawns in South Texas.

Martinez, L. Plenary: Communicating in an era of science mistrust.

Mejia, M., J. Ortiz, and **A.M. Veals Dutt**. Continuing the conversation – parenthood in the field: Challenges and advice for raising your own brood.

Petrecca, L. A road map for ocelot recovery in the United States.

Racey, A., **T.A. Campbell**, and J.M. Tomeček. Understanding the diet of an unmanaged population of coyotes in southern Texas.

Sloan, H., J.M. Tomeček, and **T.A. Campbell**. Species-specific patterns of consumption of oral rabies vaccine baits in the South Texas Plains.

Spencer, B.D., M.L. Hopper, R.W. DeYoung, A.M. Foley, D.G. Hewitt, J.A. Ortega-S., R.A. Long, **L.R. Schofield, T.A. Campbell**, and M.J. Cherry. White-tailed deer and cattle grazing – nutritional consequences for deer population performance.

Veals Dutt, A.M., J. Holbrook, M. Cherry, **T.A. Campbell**, J. Young, and M.E. Tewes. Landscape connectivity for an endangered carnivore: Habitat conservation and road mitigation for ocelots in the United States.

Yamashita, T.J., D.B. Wester, Z.M. Wardle, D. Scognamillo, **L.R. Schofield**, M.E. Tewes, J. Young, and **J.V. Lombardi**. Influence of traffic volume on the variation in felid detections with the road effect zone.

White-tailed deer are an important component of rangelands and a major economic resource in Texas. Billions of dollars are spent annually on white-tailed deer management and hunting. East Foundation's ranches are home to abundant and healthy deer populations that reflect a more natural state, largely free of human involvement. Our lands are the ideal laboratory to answer questions relating to white-tailed deer populations. Outcomes from these studies often pertain to the region, the state, and in many cases the entire nation.



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Invited Presentations

Montalvo, A. 2023. Monitoring buffelgrass response to aerial spraying. *Monte Mucho SWCD Pest Management CEU Certification*, Hebronville, TX, February.

Sawyer, J.E. 2023. Integrating research and ranching as an ARO. *Turner Enterprises Annual Management Conference*, Pierre, SD.

Sawyer, J.E. 2023. Is the ranch making money? Financial analysis for management. *New Mexico Cattle Growers' Association*, Ruidoso, NM.

Sawyer, J.E. 2023. The carbon question. *Texas Bankers Association Land & Real Estate Conference*, Austin, TX.

Woodard, D.A. 2023. *National Bobwhite and Grassland Initiative Annual Meeting*, Harrisburg, PA.

Woodard, D.A. and **A. Tautges.** 2023. *Statewide Quail Symposium*, Abilene, TX.

Popular Press, Podcasts, and Radio

Schofield, L.R. 2023. *Manage the Wild*. Episodes 145 and 149.

Woodard, D.A. 2023. Bobwhite conservation and management. *Orvis Hunting and Shooting Podcast*, hosted by Reid Bryant.

Woodard, D.A. 2023. Comparing performance metrics of bird dogs by gender – battle of the sexes: English pointer edition. *Gun Dog Central*, June.

Woodard, D.A. 2023. Unanswered questions – Bobwhite harvest research in South Texas. *Covey Rise*, December.

In the last century, northern bobwhites have experienced widespread population declines across their range. One area that has remained stable is the South Texas Sand Sheet. Bobwhite conservation is also a major driver of the rural economies of South Texas. Annual lease revenues for bobwhite hunting can yield up to \$20 per acre, generate more than \$75 million in income, and create over 1,600 jobs. A primary concern for landowners and sportsmen is the sustainability of our management practices, including harvest. To address these concerns, the East Foundation has implemented several long-term research projects that focus on evaluating the effects of harvest and land management practices. Our investigations occur on over 60,000 acres of East Foundation property and provide data on bobwhite abundance and management at an operational scale and inform future quail management





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