

**James W. Cain III**  
Unit Leader  
New Mexico Cooperative Fish and Wildlife Research Unit  
Box 30003, MSC 4901  
Las Cruces, New Mexico 88003  
Phone 575-646-3382, Fax: 575-646-1281  
Email: jwcain@nmsu.edu

## Education

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**Ph.D.** Wildlife and Fisheries Science – University of Arizona, School of Natural Resources, Tucson, Arizona, May 2006  
**M.S.** Biological Conservation – California State University, Department of Biological Sciences, Sacramento, California, May 2001  
**B.S.** Biological Science – Colorado State University, Department of Biology, Fort Collins, Colorado, May 1997

## Academic and Research Positions

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**Unit Leader** (2023 – present) – U.S. Geological Survey, New Mexico Cooperative Fish and Wildlife Research Unit, Las Cruces, New Mexico.

**Assistant Unit Leader-Wildlife** (2010 – 2023) – U.S. Geological Survey, New Mexico Cooperative Fish and Wildlife Research Unit, Las Cruces, New Mexico.

- **Graduate Courses**

<i>Wildlife-habitat Relationships</i> (FWCE 540)	Fall 2011, 2013, 2015, 2019, 2021, 2023
<i>Large Mammal Ecology, Conservation, and Management</i> (FWCE 530)	Fall 2012, 2014, 2016, 2018, 2020, 2022

**Adjunct Professor** (2021 – present). – Department of Fish, Wildlife and Conservation Ecology, New Mexico State University, Las Cruces, New Mexico.

**Adjunct Professor** (2021 – present). – Department of Biology, New Mexico State University, Las Cruces, New Mexico.

**Adjunct Associate Professor** (2015 – 2021). – Department of Fish, Wildlife and Conservation Ecology, New Mexico State University, Las Cruces, New Mexico.

**Adjunct Associate Professor** (2015 – 2021). – Department of Biology, New Mexico State University, Las Cruces, New Mexico.

**Adjunct Associate Professor** (2015 – 2021). – Department of Natural Resources Management, Texas Tech University, Lubbock, Texas.

**Adjunct Assistant Professor** (2010 – 2014). – Department of Biological and Environmental Sciences, Texas A&M University-Commerce, Commerce, Texas.

**Assistant Professor** (2008 – 2010) – Wildlife and Conservation Science, Department of Biological and Environmental Sciences, Texas A&M University-Commerce, Commerce, Texas.

- **Undergraduate Courses**

	<b>Semester</b>
<i>Quantitative Biology</i> (BSc 412)	Fall 2008, Spring 2009, Fall 2009, Spring 2010
<i>Wildlife Management I</i> (AG/BSc 335)	Fall 2008
<i>Geospatial Mapping</i> (BSc 417)	Fall 2009
<i>Field Methods for Wildlife and Conservation</i> (BSc 337)	Spring 2010

- **Graduate Courses**

<i>Wildlife-habitat Relationships</i> (BSc 597)	Spring 2009
<i>Graduate Quantitative Biology</i> (BSc 504)	Fall 2009

- Faculty advisor for Texas A&M University-Commerce Student Chapter of The Wildlife Society
- Organize and supervise undergraduate internships in wildlife management and conservation with outside universities, state and federal agencies and non-governmental organizations.

**Honorary Research Fellow** (2008 – present) – Center for African Ecology, School of Animal, Plant, & Environmental Sciences, University of the Witwatersrand, Johannesburg, South Africa.

**Postdoctoral Fellow** (2006 – 2008) – Center for African Ecology, School of Animal, Plant, & Environmental Sciences, University of the Witwatersrand, Johannesburg, South Africa.

**Adjunct Professor** (2007 – 2010) – Wildlife Conservation and Management, School of Renewable Natural Resources, University of Arizona, 325 Biological Sciences East, Tucson, Arizona

**Lecturer** (2008) – Post-graduate Project Office, University of the Witwatersrand, Johannesburg, South Africa

**Lecturer** (2007) – School of Animal, Plant, & Environmental Sciences, University of the Witwatersrand, Johannesburg, South Africa

## **Graduate Students**

### **Current**

Lucas Begeman, M.S. student. Thesis: Habitat selection and movements of pronghorn in southwestern New Mexico. Department of Fish, Wildlife, and Conservation Ecology, New Mexico State University, Las Cruces.

Matthew Keeling, M.S. student. Thesis: Habitat selection of American black bears in north-central New Mexico. Department of Fish, Wildlife, and Conservation Ecology, New Mexico State University, Las Cruces.

Maxwell Marwin, M.S. student. Thesis: Mountain lion kill rates and black bear kleptoparasitism in northern New Mexico. Department of Natural Resource Ecology and Management, Oklahoma State University, Stillwater. (Co-advised with Robert Lonsinger).

Ruth Passernig, M.S. student. Thesis: Black bear kleptoparasitism of mountain lion kills: effects of bear density on mountain lion kill rates. Department of Fish, Wildlife, and Conservation Ecology, New Mexico State University, Las Cruces.

Mark Peyton, Ph.D. student. Dissertation. Influence of landscape-scale habitat disturbances on mountain lion habitat selection, foraging ecology, and intra-specific competition. Department of Biology, New Mexico State University, Las Cruces.

Julia Runkle, M.S. student. Thesis: Adaptive resource selection and movements of pronghorn in relation to landscape permeability and rainfall in the Chihuahuan Desert. Department of Fish, Wildlife, and Conservation Ecology, New Mexico State University, Las Cruces.

Sharon Smythe, Ph.D. student. Dissertation: Influence of wildfires and landscape scale forest restoration on resource selection and foraging ecology of elk. Department of Natural Resources Management, Texas Tech University, Lubbock. (Co-supervised with Dr. Warren Conway)

### **Completed**

Boyle, S.T. 2025. Elk demographics in the southwestern United States with a recovering Mexican wolf population. Ph.D. Dissertation. Department of Biology, New Mexico State University, Las Cruces. 197 pp.

Ennis, J.R. 2025. Identification and characterization of habitat conditions of elk, mule deer, and pronghorn migration routes and stopover sites in northcentral New Mexico. M.S. Thesis. Department of Fish, Wildlife, and Conservation Ecology, New Mexico State University, Las Cruces. 219 pp.

- Martinez, S.I. 2024. Kill rates and prey composition of Mexican gray wolves (*Canis lupus baileyi*) and cougars (*Puma concolor*) in the Southwest. Department of Fish, Wildlife, and Conservation Ecology, New Mexico State University, Las Cruces. 115 pp.
- Evans, A.D. 2024. The influence of recreational disturbance on desert bighorn sheep behavior and stress in western Colorado. Department of Fish, Wildlife, and Conservation Ecology, New Mexico State University, Las Cruces. 103 pp.
- Olson, J.E. 2024. Spatial and temporal risk from a reintroduced predator influences elk foraging behavior. MS Thesis. Department of Fish, Wildlife, and Conservation Ecology, New Mexico State University, Las Cruces. 139 pp.
- Ruhl, C.Q., 2022. Improving population estimates for desert bighorn sheep in New Mexico through double-observer sightability modeling and the estimation of residual heterogeneity. MS Thesis. Department of Fish, Wildlife and Conservation Ecology, New Mexico State University. 213 pp.
- Thompson, C.J. 2022. Elk habitat selection in response to predation risk from Mexican gray wolves. M.S. Thesis. Department of Fish, Wildlife, and Conservation Ecology, New Mexico State University, Las Cruces. 112 pp.
- Farley, Z. 2022. Influence of Mexican gray wolves on elk behavior in relation to maternal constraints, multitasking, and predation risk. M.S. Thesis. Department of Fish, Wildlife, and Conservation Ecology, New Mexico State University, Las Cruces. 117 pp.
- Etchart, J.L. 2021. Evaluating water use and seasonal ranges of desert bighorn sheep and aoudad in the Sierra Vieja Mountains, Texas. M.S. Thesis. Department of Natural Resource Management, Sul Ross State University, Alpine, Texas. (Co-supervised with Dr. Ryan O'Shaughnessy). 134 pp.
- Karish, T. 2020. Habitat selection by feral burros in the Mojave Desert. M.S. Thesis, New Mexico State University, Las Cruces. (Co-supervised with Dr. Gary Roemer). 86 pp.
- Prude, C.H. 2020. Influence of habitat heterogeneity and water sources on kill site locations and puma prey composition. M.S. Thesis, New Mexico State University, Las Cruces. 97 pp.
- Kunkel, A. 2020. Breeding season survival of lesser prairie-chickens (*Tympanuchus pallidicinctus*) and fire ecology in the shinnery oak prairie of eastern New Mexico. M.S. Thesis, New Mexico State University, Las Cruces. 101 pp.
- Rossettie, T.S. 2019. Monitoring mountain lions in the desert southwest: Spatial density estimation and results of a novel hair sampling technique. M.S. Thesis, New Mexico State University, Las Cruces. 75 pp. (Co-supervised with Dr. Travis Perry)
- Anaya, A.J. 2019. Mountain lion (*Puma concolor*) kill rates and prey composition in north-central New Mexico. Department of Natural Resources Management, New Mexico Highlands University. 57 pp.
- Gould, M.J. 2019. Using genetic based methods to monitor American black bear populations in the American southwest. Ph.D. Dissertation. Department of Biology, New Mexico State University, Las Cruces. 217 pp. (Co-supervised with Dr. Gary Roemer)
- Reddell, C.D. 2018. Anthropogenic resource use and disease dynamics in a desert coyote population. Thesis. Department of Fish, Wildlife and Conservation Ecology, New Mexico State University, Las Cruces. 120 pp. (Co-supervised with Dr. Gary Roemer)
- Kay, J.H. 2018. Top-down and bottom up influences on mule deer in central New Mexico. M.S. Thesis. Department of Fish, Wildlife and Conservation Ecology, New Mexico State University, Las Cruces. 186 pp.
- Bard, S.M. 2018. Microsite habitat selection and pathogen prevalence of black bears (*Ursus americanus*) in the Jemez Mountains, New Mexico. M.S. Thesis. Department of Fish, Wildlife and Conservation Ecology, New Mexico State University, Las Cruces. 89 pp.
- Roerick, T.M., 2017. Effects of Forest restoration on habitat selection of female mule deer in the Jemez Mountains, New Mexico. M.S. Thesis. Department of Fish, Wildlife and Conservation Ecology, New Mexico State University, Las Cruces. 143 pp.

- Humagain, K. 2016. Ecological variation among vegetation cover types and forest stand dynamics in the south-west Jemez Mountains, New Mexico. Ph.D. Dissertation, Texas Tech University, Lubbock. 145 pp. (Co-supervised with Dr. R. Cox)
- Ashling, J.B. 2015. Survival, cause-specific mortality, and habitat selection of translocated mule deer in southern New Mexico. Department of Fish, Wildlife and Conservation Ecology, New Mexico State University, Las Cruces. 134 pp.
- Kindschuh, S.R. 2015. Efficacy of GPS cluster analysis for predicting black bear carnivory sites. M.S. Thesis. Department of Fish, Wildlife and Conservation Ecology, New Mexico State University. Las Cruces. 73 pp.
- Roberts, C. 2015. Seasonal and diel elk habitat selection in the Jemez Mountains of New Mexico. M.S. Thesis. Department of Natural Resources Management, Texas Tech University, Lubbock. 133 pp. (Co-supervised with Dr. Robert Cox)
- Garrison, K.R. 2014. Influence of livestock grazing on desert bighorn sheep (*Ovis canadensis mexicana*) forage resources and foraging behavior. M.S. Thesis. Department of Fish, Wildlife and Conservation Ecology, New Mexico State University. Las Cruces. 83 pp.
- Karsch, R.C. 2014. Desert bighorn sheep adult female and lamb survival, cause-specific mortality, and parturient female habitat selection in the Peloncillo Mountains, New Mexico, USA. M.S. Thesis. Department of Fish, Wildlife and Conservation Ecology, New Mexico State University, Las Cruces. 121 pp.
- Overstreet, M.W. 2014. Body condition and survival of desert bighorn sheep in relation to habitat and precipitation on the Kofa National Wildlife Refuge, Arizona. M.S. Thesis. Department of Fish, Wildlife and Conservation Ecology, New Mexico State University, Las Cruces. 69 pp.
- Pitman, J.W. 2013. Microhabitat selection and mortality site characteristics of elk (*Cervus canadensis*) calves and adult elk calf-rearing habitat selection in areas of differing predation influences in southern and northern New Mexico. M.S. Thesis. Department of Fish, Wildlife and Conservation Ecology, New Mexico State University, Las Cruces. 160 pp.
- Lewis, J.D. 2012. Population status and habitat selection of an inland alligator (*Alligator mississippiensis*) population at the Fort Worth Nature Center and Refuge. M.S. Thesis. Department of Biological and Environmental Science, Texas A&M University-Commerce. 117 pp.
- Smith, K.N. 2011. Nesting ecology and multi-scale habitat use of the black-capped vireo. M.S. Thesis. Department of Biological and Environmental Science, Texas A&M University-Commerce. 80 pp.
- O'Shaughnessy, R. 2010. Comparative diet and habitat selection of puku (*Kobus vardonii*) and lechwe (*Kobus leche*) on the Chobe River Floodplain, Botswana. M.Sc. Thesis School of Animal, Plant, and Environmental Sciences, University of the Witwatersrand, Johannesburg, South Africa. 159 pp.
- Dabengwa, A.N. 2009. Assessing the role of woody cover in resource selection by sable antelope (*Hippotragus niger*) in northern Kruger National Park. M.Sc. Thesis, School of Animal, Plant, and Environmental Sciences, University of the Witwatersrand, Johannesburg, South Africa. 83 pp. (Co-supervised with Dr. Barend Erasmus)

## Publications and presentations

### Publications

91. Thompson, C.J., N.M. Tatman, Z.J. Farley, S.T. Boyle, A.R. Greenleaf, and **J.W Cain III**. 2025. Spatiotemporal risk avoidance varies seasonally, relative to risk intensity, in a reestablishing predator-prey system. *Frontiers in Ecology and Evolution* 13:1613904.

90. Padilla, C.J., **J.W. Cain III**, M.E Gompper, P.R. Krausman, and J. deVos. 2025. Serological assessment of pathogen exposure among desert bighorn sheep in southwestern Arizona. *Southwestern Naturalist* 68:294–300.
89. Ruhl, C.Q., **J.W. Cain III**, F. Abadi, and J.D. Hennig. 2025. Estimating abundance of desert bighorn sheep with double-observer sightability modeling with residual heterogeneity. *Journal of Wildlife Management* 89:e70050.
88. Bassing, S.B., J.K. Oakleaf, **J.W. Cain III**, A.R Greenleaf, C.M. Gardner, and D.E. Ausband. 2025. Predicting pup rearing habitat for Mexican wolves. *Journal of Wildlife Management* 89:e70017.
87. Parikh, G.L., J.L. Etchart, R. O'Shaughnessy, L.A. Harveson, and **J.W. Cain III**. 2025. Feeding habits of sympatric aoudad (*Ammotragus lervia*) and bighorn sheep (*Ovis canadensis*) in west Texas. *Journal of Wildlife Management* 89: e70008.
86. Lichwa-Schneider, E., **J.W. Cain III**, H. Y. Wan, G. Fuller, C. Millberry, and M.S. Gunther. 2025. Ecological and social drivers of Mexican wolf home range size across spatiotemporal scales. *Journal of Mammalogy* 106:105–117.
85. Padilla, C.J., C.Q. Ruhl, **J.W. Cain III**, and M.E Gompper. 2024. Effects of *Mycoplasma ovipneumoniae*, abundance, and environmental conditions on bighorn sheep lamb:ewe ratios and adult survival in New Mexico. *Ecosphere* 15:e70095.
84. Parikh, G.L., R.C. Karsch, **J.W. Cain III**, E.M Rominger, and E.J. Goldstein. 2024. Neonate morphometrics and lambing season characteristics of desert bighorn sheep. *Mammalia* 2024-0074.
83. Padilla, C.J., J.T. Martin, **J.W. Cain III**, and M.E Gompper. 2024. Abiotic and demographic drivers of flea parasitism on deer mice in a recovering mixed-conifer forest a decade post-fire. *Journal of Parasitology* 110:375–385.
82. Farley, Z.J., C.J. Thompson, S.T. Boyle, N.M. Tatman, and **J.W. Cain III**. 2024. Behavioral trade-offs and multitasking by elk in relation to predation risk from Mexican gray wolves. *Ecology and Evolution* 14:e11383.
81. **Cain, J.W., III**, J.H. Kay, S.G. Liley, and J.V. Gedir. 2024. Mule deer (*Odocoileus hemionus*) resource selection: trade-offs between forage and predation risk. *Frontiers in Ecology and Evolution* 12:1121439
80. White, L.M., S.J. Gifford, G. Kaufman, E. Gese, M.A. Peyton, R.R. Parmenter, and **J.W. Cain III**. 2024. Seroprevalence and patterns of canine parvovirus, distemper virus, plague, and tularemia in free-ranging coyotes (*Canis latrans*) in northern New Mexico, USA. *Journal of Wildlife Diseases* 60:14–25.
79. Pitman, J.W., **J.W. Cain III**, W.R. Gould, N.T. Tatman, and S.G. Liley. 2024. Habitat selection and survival of elk neonates. *Southwestern Naturalist* 67:205–215.
78. Karish, T., G.W. Roemer. D.K. Delaney, and **J.W. Cain III**. 2023. Habitat selection and water dependency of feral burros in the Mojave Desert. *Journal of Wildlife Management* 87:e22429.
77. Nams, V., et al. 2023. Spatial patterns of large African cats: a large-scale study on density, home range size, and home range overlap of lions *Panthera leo* and leopards *Panthera pardus*. *Mammal Review* 53:49–64.
76. Reddell, C.D., G.W. Roemer, D.K. Delaney, T. Karish, and **J.W. Cain III**. 2023. Anthropogenic subsidies influence resource use during a mange epizootic in a desert coyote population. *Oecologia* 201:435–447
75. Gould, M.J., **J.W. Cain III**, T.C. Atwood, L.E. Harding, H.E. Johnson, D.P. Onorato, F.S. Winslow, and G.W. Roemer. 2022. Pleistocene-Holocene vicariance not Anthropocene landscape change, explains the genetic structure of American black bear (*Ursus americanus*) populations in the American Southwest and northern Mexico. *Ecology and Evolution* 12:e9406.

74. Yiu, S-W., N. Owen-Smith, and **J.W. Cain III**. 2022. How do lions move at night when they hunt? *Journal of Mammalogy* 103:855–864.
73. Harris, G.M., M.J. Butler, D.R. Stewart, and **J.W. Cain III**. 2022. The abundance and persistence of *Caprinae* populations. *Scientific Reports* 12:13807.
72. Butler, M.J., K.L. Metzger, C.R. Sanspree, **J.W. Cain III**, and G.M. Harris. 2022. Whooping and sandhill cranes visit upland ponds proportional to migration phenology on the Texas coast. *Wildlife Society Bulletin* 46:e1290.
71. Hennig, J.D., K.A. Schoenecker, **J.W. Cain III**, G.W. Roemer, and J.L. Laake. 2022. Accounting for residual heterogeneity in double-observer sightability models to decrease bias in feral burro abundance estimates. *Journal of Wildlife Management* 86:e22239.
70. Rossettie, T.S., T.W. Perry, and **J.W. Cain III**. 2022. Noninvasive sampling of mountain lion hair by modified foothold traps. *Wildlife Society Bulletin* 46:e1257.
69. Prude, C.H., and **J.W. Cain III**. 2021. Habitat diversity influences puma (*Puma concolor*) diet in the Chihuahuan Desert. *Wildlife Biology* wlb.00875.
68. Schweiger, B.R., J.K. Frey, and **J.W. Cain III**. 2021. A case for multiscale habitat selection studies of small mammals. *Journal of Mammalogy* 102:1249–1265.
67. Gedir, J.V., **J.W. Cain III**, B.C. Lubow, T. Karish, D.K. Delaney, and G.W. Roemer. 2021. Estimating abundance and simulating fertility control in a feral burro population inhabiting the Mojave Desert, California. *Journal of Wildlife Management* 85:1187–1199.
66. Reddell, C.D., F. Abadi, D.K. Delaney, **J.W. Cain III**, and G.W. Roemer. 2021. Urbanization's influence on the distribution of mange in a carnivore revealed with multistate occupancy models. *Oecologia* 195:105–116.
65. Gedir, J.V., **J.W. Cain III**, T.L. Swetnam, P.R. Krausman, and J.R. Morgart. 2020. Extreme drought and adaptive resource selection by a desert mammal. *Ecosphere* 11(7):e03175.
64. Sorensen, G.E., D.W. Kramer, **J.W. Cain III**, C.A. Taylor, , P.S. Gipson, M.C. Wallace, R.D. Cox, and W.B. Ballard. 2020. Mule deer habitat selection following vegetation thinning treatments in New Mexico. *Wildlife Society Bulletin* 44:122–129.
63. Bard, S.M., and **J.W. Cain III**. 2020. Investigation of bed and den site selection by American black bears (*Ursus americanus*) in a landscape impacted by forest restoration treatments and wildfires. *Forest Ecology and Management* 460 Article 117904:1–11.
62. Bard, S.M., and **J.W. Cain III**. 2019. Pathogen prevalence in American black bears (*Ursus americanus amblyceps*) of the Jemez Mountains, New Mexico, USA. *Journal of Wildlife Diseases* 55:745–754.
61. Roerick, T.M., **J.W. Cain III**, and J.V. Gedir. 2019. Forest restoration, wildfire and habitat selection by female mule deer. *Forest Ecology and Management* 447:169–179.
60. Gould, M.J., W.R. Gould, **J.W. Cain III**, and G.W. Roemer. 2019. Validating performance of occupancy models for estimating habitat use and predicting the distribution of highly-mobile species: a case study using the American black bear. *Biological Conservation* 234:28–36.
59. **Cain, J.W. III**, R.C. Karsch, E.J. Goldstein, E.M. Rominger, and W.R. Gould. 2019. Survival and cause-specific mortality of desert bighorn sheep lambs. *Journal of Wildlife Management* 83:251–259.
58. Humagain, K., C. Portillo-Quintero, R.Cox, and **J.W. Cain III**. 2018. Estimating forest canopy cover dynamics in Valles Caldera National Preserve, New Mexico, using LiDAR and Landsat data. *Applied Geography* 99:120–132.
57. Amirkhiz, R.G., J.K. Frey, **J.W. Cain III**, S.W. Breck, D.L. Bergman. 2018. Predicting spatial factors associated with cattle depredations by the Mexican wolf (*Canis lupus baileyi*) with recommendations for depredation risk modeling. *Biological Conservation* 224:327–335.
56. **Cain, J.W. III**, J.B. Ashling, and S.G. Liley. 2018. Survival and cause-specific mortality of translocated female mule deer in southern New Mexico, USA. *Wildlife Research* 45:325–335.

55. Tatman, N.M., S.G. Liley, **J.W. Cain III**, and J.W. Pitman. 2018. Effects of nutrition and calf predation on elk vital rates in New Mexico. *Journal of Wildlife Management* 82:1417–1428.
54. Gould, M.J., **J.W. Cain III**, G.W. Roemer, W.R. Gould, and S. G. Liley. 2018. Density of American black bears in New Mexico. *Journal of Wildlife Management* 82:775–788.
53. Roberts, C.P., **J.W. Cain III**, and R.D. Cox. 2017. Identifying ecologically-relevant scales of habitat selection: behavioral patterns reveal diel-scale selection in elk. *Ecosphere* 8:art e02013.
52. Smith-Hicks, K.N., T.J. Conkling, M. L. Morrison, **J.W. Cain III**, and R.N. Wilkins. 2017. Nest height and vertical vegetation associated with black-capped vireo breeding success in southwest Texas. *Southeastern Naturalist* 16:567–583.
51. **Cain, J.W., III**, J.V. Gedir, P.R. Krausman, J.P. Marshal, J.D. Allen, G.C. Duff, B.D. Jansen and J.R. Morgart. 2017. Extreme precipitation variability, forage quality and large herbivore diet selection in arid environments. *Oikos* 126:1459–1471.
50. **Cain, J.W. III**, M.M. Avery, C.C. Caldwell, L.B. Abbot, and J.L. Holechek. 2017. Diet composition, quality, and overlap of sympatric American pronghorn and gemsbok. *Wildlife Biology* wlb00296:1–10.
49. Humagain, K., C. Portillo-Quintero, R. Cox, and **J.W. Cain III**. 2017. Mapping tree density in forests of the Southwestern USA using Landsat 8 data. *Forests* 8:287.
48. Roberts, C.P., **J.W. Cain III**, and R.D. Cox. 2016. Application of activity sensors for estimating behavioral patterns. *Wildlife Society Bulletin* 40:764–771.
47. Kindschuh, S.R., **J.W. Cain III**, D. Daniel and M.A. Peyton. 2016. Efficacy of GPS cluster analysis for predicting carnivory sites of a wide-ranging omnivore: the American black bear. *Ecosphere* 7: art e01513.
46. Doyle, J.M. T.E. Katzner, G.W. Roemer, **J.W. Cain III**, B. Millsap, C. McIntyre, S.A. Sonsthagen, N. Fernandez, M. Wheeler, Z. Bulut, P. Bloom, and J.A. DeWoody. 2016. Genetic structure and viability selection in the Golden Eagle (*Aquila chrysaetos*), a vagile raptor with a holarctic distribution. *Conservation Genetics* 17:1307–1322.
45. Karsch, R.C., **J.W. Cain III**, E.M. Rominger, and E.J. Goldstein. 2016. Desert bighorn lambing habitat: Parturition, lamb nursery, and predation sites. *Journal of Wildlife Management* 80:1069–1080.
44. Gedir, J.V., **J.W. Cain III**, P.R. Krausman, J.D. Allen, G.C. Duff, and J.R. Morgart. 2016. Potential foraging decisions by a desert ungulate to balance water and nutrient intake in a water-stressed environment. *PLoS ONE* 11(2):e0148795.doi:10.1371/journal.pone.0148795
43. Garrison, K.R., **J.W. Cain III**, E.M. Rominger, and E.J. Goldstein. 2016. Sympatric cattle grazing and desert bighorn sheep foraging. *Journal of Wildlife Management* 80:197–207.
42. Gedir, J.V., **J.W. Cain III**, G. Harris, and T.T. Turnbull. 2015. Effects of climate change on long-term population growth of pronghorn in an arid environment. *Ecosphere* 6: art 189.
41. Kramer, D.W., G.E. Sorensen, C.A. Taylor R.D. Cox, P.S. Gibson, and **J.W. Cain III**. 2015. Ungulate exclusion, conifer thinning and mule deer forage in northeastern New Mexico. *Journal of Arid Environments* 113:29–34.
40. Pitman, J.W., **J.W. Cain III**, S.G. Liley, W.R. Gould, N.T. Quintana, and W. B. Ballard. 2014. Post-parturition habitat selection by elk calves and adult female elk in New Mexico. *Journal of Wildlife Management* 78:1216–1227.
39. O’Shaughnessy, R., **J.W. Cain III**, and N. Owen-Smith. 2014. Comparative diet and habitat selection of puku and lechwe in northern Botswana. *Journal of Mammalogy* 95:933–942.
38. Lewis, J.D., **J.W. Cain, III**, and R. Denkhous. 2014. Home range and habitat selection of an inland alligator (*Alligator mississippiensis*) population at the northwestern edge of the distribution range. *Southeastern Naturalist* 13:261–279.
37. Smith, J.B., D.P. Walsh, E.J. Goldstein, Z.D. Parsons, R.C. Karsch, J.R. Stiver, **J.W. Cain III**, K.J. Raedeke, and J.A. Jenks. 2014. Techniques for capturing bighorn sheep lambs. *Wildlife Society Bulletin* 38:165–174.



36. Turnbull, T.T., **J.W. Cain III**, and G.W. Roemer. 2013. Anthropogenic impacts to the recovery of the Mexican wolf with a focus on trapping-related incidents. *Wildlife Society Bulletin* 37:311–318.
35. Pepper, M.B., L.D. Howery, P.R. Krausman, G.B. Ruyle, **J.W. Cain III**, and D.W. Schafer. 2013. Adaptive grazing management for cattle and elk forage use in central Arizona. *Southwestern Naturalist* 58:20–27.
34. **Cain, J.W., III**, N. Owen-Smith, and V.A. Macandza. 2012. The costs of drinking: comparative water dependency of sable antelope and zebra. *Journal of Zoology* 286:58–67.
33. Conkling, T.J., T.L. Pope, K.N. Smith, H.A. Mathewson, M.L. Morrison, R.N. Wilkins, and **J.W. Cain III**. 2012. Black-capped vireo nest predator assemblage and predictors for nest predation. *Journal of Wildlife Management* 76:1401–1411.
32. Macandza, V.A., N. Owen-Smith, and **J.W. Cain III**. 2012. Habitat and resource partitioning between abundant and relatively rare grazing ungulates. *Journal of Zoology* 287:175–185.
31. Smith, K.N., **J.W. Cain III**, M.L. Morrison, and R.N. Wilkins. 2012. Nesting ecology of the black-capped vireo in southwest Texas. *Wilson Journal of Ornithology* 124:277–285.
30. Macandza, V.A., N. Owen-Smith, and **J.W. Cain III**. 2012. Dynamic spatial partitioning and coexistence among tall grass grazers in an African savanna. *Oikos* 121:891–898.
29. Smith, K.N., **J.W. Cain III**, M.L. Morrison, and R.N. Wilkins. 2012. A novel songbird nest predator: the Greater Arid-land Katydid. *American Midland Naturalist* 167:210–212.
28. Justice-Allen, A.E., C.J. Luedtke, M.W. Overstreet, **J.W. Cain III**, and T.R. Stephenson. 2011. Prevalence of *Mycoplasma ovipneumoniae* in desert bighorn sheep in Arizona. *Desert Bighorn Council Transactions* 51:1–10.
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### **Government Publications and Agency Reports**

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- Bombay, H.L., M.L. Morrison, D.E. Taylor, and **J.W. Cain**. 2001. Annual report and preliminary demographic analysis for willow flycatcher monitoring in the Central Sierra Nevada. U.S. Forest Service, Tahoe National Forest.
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### **Presentations and Posters** (\*presenter)

#### *Invited seminars:*

- \***Cain, J.W., III**. 2025. Direct and indirect effects of Mexican wolf recovery on elk in the Southwest. Department of Wildlife, Fisheries, and Conservation Biology, University of Maine.
- \***Cain, J.W., III**. 2025. Direct and indirect effects of Mexican wolf recovery on elk in the Southwest. Institute for Arctic Biology, University of Alaska-Fairbanks.
- \*Lowrey, B., A. Beers, J. Begay, S. Bergen, K. Blecha, S. Bundick, **J.W. Cain III**, M. Cowardin, O. Duvuvuei, A. Ehrhart, M. Flenner, J. Fort, J. Gagnon, E. Gelzer, E. Greenspan, E. Hagler, M. Hanson, V.D. Hinojoza–Rood, C. McKee, J.L. McKee, J.A. Merkle, B.A. Oates, C. Reddell, R. Ritson, B.M. Russon, H. Sawyer, C. Schroeder, S. Sprague, N. Tatman, D. Whittaker, S. Wiechman, and M.L. Kauffman. Mapping Big Game Migrations Across the

Western States: Science Support for Management and Conservation. Annual Meeting of The Wildlife Society, Baltimore, Maryland, USA.

- \*Boyle, A., C. Britt, **J.W. Cain III**, G.W. Roemer, R. Schooley, K. Hanley, and M. Gompper. 2023. Lagomorphs in the southwestern US arid landscapes: Thoughts on population variability and RHDV2 impacts. 30th Annual Conference of The Wildlife Society, Louisville, Kentucky, USA.
- \*Hennig, J. D., K. A. Schoenecker, **J. W. Cain III**, and G. W. Roemer. 2021. A double-observer sightability model for estimating feral burro abundance. 28<sup>th</sup> Annual Conference of The Wildlife Society, Virtual Online.
- \***Cain, J.W., III**. 2018. Working towards more informed landscape-scale forest restoration in the Southwest: responses of mule deer, elk and black bears to treatments and wildfires. Keynote address: Annual Meeting of the Rio Grande Water Fund, Albuquerque, New Mexico.
- \***Cain, J.W., III** and J.V. Gedir. 2018. Foraging decisions and populations dynamics: ungulates under a warmer climate. Webinar - National Climate Change and Wildlife Science Center and National Conservation Training Center.
- \***Cain, J.W., III**. 2017. Coping with water and heat stress: Behavioral and physiological adaptations of desert ungulates. 42<sup>nd</sup> Annual Meeting and Symposium of the Desert Tortoise Council, Las Vegas Nevada.
- \***Cain, J.W., III**. 2016. Habitat selection by desert bighorn sheep: Past, present and future directions. 41<sup>st</sup> Annual Meeting and Symposium of the Desert Tortoise Council, Las Vegas Nevada.
- \***Cain, J.W., III**. 2013. Habitat and resource partitioning among tall-grass grazers: sable antelope, zebra, and buffalo in Kruger National Park, South Africa. Department of Biology, New Mexico State University.
- \***Cain, J.W., III**. 2012. Habitat management for large mammals in arid and semi-arid ecosystems: consequences of providing water sources for wildlife. School of Forestry, Northern Arizona University, Flagstaff, USA.
- \*O'Shaughnessy, R., **J.W. Cain III**, and N. Owen-Smith. 2012. Feeding ecology of puku and lechwe on the Chobe River floodplains, Botswana. Caracal Biodiversity and Environmental Research Center, Kasane, Botswana.
- \***Cain, J.W., III**. 2011. Influence of interspecific competition and predation risk on multi-scale habitat use of sable antelope. Department of Natural Resource Management, Sul Ross State University, Alpine, Texas, USA.
- \***Cain, J.W., III**, and N. Owen-Smith. 2008. Habitat management for large mammals in arid and semi-arid ecosystems: consequences of providing water sources for wildlife. Invited Seminar. Harry Oppenheimer Okavango Research Centre, University of Botswana, Maun, Botswana.
- \***Cain, J.W., III**. 2007. Responses of desert bighorn sheep to the removal of anthropogenic water sources. School of Animal, Plant & Environmental Science, University of the Witwatersrand, Johannesburg, South Africa.

*Contributed presentations and posters (\*presenter):*

- Boyle, S.T., F. Abadi, J.V. Gedir, and N.M. Tatman and **\*J.W. Cain III**. 2025. Recovery of the Mexican gray wolf (*Canis lupus baileyi*) and its influence on elk (*Cervus canadensis*) populations in the southwestern United States. International Wildlife Congress, Lillehammer, Norway.
- \*Marwin, M.N., R.C. Lonsinger, R. Hula, L.J. Bernal, C.G. Kruse, M.C. Chitwood, **J.W. Cain III**. 2025. Black bears shape the scavenging behavior of coyotes at cougar kill sites. American Society of Mammalogists 104<sup>th</sup> Annual Conference, West Lafayette, Indiana, USA.

- \*Martinez, S.I., N.M. Tatman, S.G. Liley, J.C. deVos, and **J.W. Cain III**. 2025. Kill rates and prey composition of Mexican gray wolves and cougars in the Southwest. 16<sup>th</sup> Biennial Deer and Elk Workshop, Nanaimo, British Columbia, Canada.
- Ennis, J.R., **J.W. Cain III**, and \*N.M. Tatman. 2025. Migratory deer and elk decide how long to remain at stopovers, depending on landscape conditions. 16<sup>th</sup> Biennial Deer and Elk Workshop, Nanaimo, British Columbia, Canada (poster).
- \*Boyle, S.T., F. Abadi, J. Gedir, N. Tatman, J. deVos, Jr., and **J.W. Cain III**. 2025. Demographic response of elk following the reintroduction of the Mexican wolf. 16<sup>th</sup> Biennial Deer and Elk Workshop, Nanaimo, British Columbia, Canada.
- \*Evans, A.D., B. Banulis, N. Perry, C.R. Anderson, Jr., M. Buenemann, and **J.W. Cain III**. 2025. The influence of recreational disturbance on desert bighorn sheep behavior and stress in western Colorado. 58<sup>th</sup> Meeting of the Desert Bighorn Council, Gold Canyon, Arizona, USA.
- Padilla, C., C. Ruhl, \***J.W. Cain III**, and M. Gompper. 2025. Effects of *Mycoplasma ovipneumoniae*, abundance, and climate conditions on bighorn sheep lamb:ewe ratios in New Mexico. 58<sup>th</sup> Meeting of the Desert Bighorn Council, Gold Canyon, Arizona, USA.
- \*Peyton, M.A., S. Milligan, B. Van Der Werff, and **J.W. Cain III**. 2025. Den site to dispersal: insights into puma reproduction, survival, and movement. 14<sup>th</sup> Mountain Lion Workshop, Albuquerque, New Mexico, USA.
- \*Marwin, M.N., R. Hula, R.C. Lonsinger, L.J. Bernal, C. Kruse<sup>6</sup>, M.C. Chitwood and **J.W. Cain III**. 2025. Predator interactions at cougar kill sites: a co-occurrence model of black bears and coyotes. 14<sup>th</sup> Mountain Lion Workshop, Albuquerque, New Mexico, USA.
- \*Peyton, M.A., S. Milligan, B. Van Der Werff, and **J.W. Cain III**. 2025. Den site to dispersal: insights into puma reproduction, survival, and movement. Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Albuquerque, New Mexico.
- \*Keeling, M., and **J.W. Cain III**. 2024. Black bear resource selection and responses to wildfires and forest restoration treatments in the Jemez Mountains. 4<sup>th</sup> Southwest Fire Ecology Conference, Santa Fe, New Mexico, USA. (poster)
- \*Begeman, L.J., and **J.W. Cain III**. 2024. Influence of anthropogenic structures on pronghorn (*Antilocapra americana*) movements and habitat selection in the Chihuahuan Desert. The Wildlife Society Annual Conference, Baltimore, Maryland, USA. (poster)
- \*Evans, A.D., B. Banulis, N. Perry, C.R. Anderson, Jr., and **J.W. Cain III**. 2024. Influence of wildland recreation on desert bighorn sheep behavior in western Colorado. Joint Annual Meeting of Arizona/New Mexico Chapters of The Wildlife Society, Flagstaff, Arizona, USA.
- \*Keeling, M., and **J.W. Cain III**. 2024. Black bear resource selection and response to wildfires and forest restoration treatments in the Jemez Mountains. Joint Annual Meeting of Arizona/New Mexico Chapters of The Wildlife Society, Flagstaff, Arizona, USA.
- \*Martinez, S.I., N.M. Tatman, S.G. Liley, J.C. deVos and **J.W. Cain III**. 2024. Kill rates and prey composition of Mexican gray wolves and cougars in New Mexico and Arizona. Joint Annual Meeting of Arizona/New Mexico Chapters of The Wildlife Society, Flagstaff, Arizona, USA.
- Padilla, C.J., C.Q. Ruhl, **J.W. Cain III**, and \*M.E. Gompper. 2023. Impacts of *Mycoplasma ovipneumoniae* on bighorn sheep lamb-ewe ratios and individual survival in New Mexico. Chihuahuan Desert Conference, El Paso, Texas, USA.
- \*Boyle, A.T., C. Britt, G. Roemer, **J.W. Cain III**, G.W. Roemer, and M.E. Gompper. 2023. Assessing the impact of RHDV2 emergence on Chihuahuan Desert lagomorph populations in southern New Mexico. Chihuahuan Desert Conference, El Paso, Texas, USA.
- \*Parikh, G.L., J.L. Etchart, R. O'Shaughnessy, L.A. Harveson, C.E. Gonzalez, F. Hernandez, and **J.W. Cain III**. 2023. Multi-scale habitat selection of desert bighorn sheep and sympatric non-native Barbary sheep in a west Texas mountain range. Chihuahuan Desert Conference, El Paso, Texas, USA.



- \*Martinez, S.I., N.M. Tatman, S.G. Liley, J.C. deVos and **J.W. Cain III**. 2023. Kill rates and prey composition of Mexican gray wolves and cougars in New Mexico and Arizona. Chihuahuan Desert Conference, El Paso, Texas, USA.
- \*Olson, J., N.M. Tatman, S.G. Liley, J.C. deVos, and **J.W. Cain III**. 2023. Spatial and temporal risk from a reintroduced predator influences elk foraging behavior. Chihuahuan Desert Conference, El Paso, Texas, USA.
- \*Boyle, S.T., F. Abadi, N. Tatman, S. Liley, J. deVos, J. Avey, and **J.W. Cain III**. 2023. Demographic rates of elk following reintroduction of the Mexican gray wolf. 30<sup>th</sup> Annual Conference of The Wildlife Society, Louisville, Kentucky, USA.
- \*Martinez, S.I., N.M. Tatman, S.G. Liley, J.C. deVos and **J.W. Cain III**. 2023. Estimating kill rates and prey composition of Mexican gray wolves and cougars in New Mexico and Arizona. 30<sup>th</sup> Annual Conference of The Wildlife Society, Louisville, Kentucky, USA.
- \*Olson, J., N.M. Tatman, S.G. Liley, J.C. deVos, and **J.W. Cain III**. 2023. Spatial and temporal risk from a reintroduced predator influences elk foraging behavior. 30<sup>th</sup> Annual Conference of The Wildlife Society, Louisville, Kentucky, USA.
- \*Keeling, M., G.L. Parikh and **J.W. Cain III**. 2023. Black bear resource selection and response to wildfires and forest restoration treatments in the Jemez Mountains. 30<sup>th</sup> Annual Conference of The Wildlife Society, Louisville, Kentucky, USA. (POSTER)
- \*Cajero, A.B., Jr., R.C. Lonsinger, **J.W. Cain III**, L.J. Bernal, C. Kruse, and M.C. Chitwood. 2023. Evaluation of cougar predation and bear kleptoparasitism on Vermejo Park Ranch, New Mexico. 30<sup>th</sup> Annual Conference of The Wildlife Society, Louisville, Kentucky, USA. (POSTER)
- \*Kirby, A., C. Britt, G. Roemer, **J.W. Cain III**, G.W. Roemer, R. Schooley, B. Bestelmeyer, and M.E. Gompper. 2023. RHDV2 emergence in New Mexican lagomorphs. 13<sup>th</sup> International Mammalogical Congress, Anchorage, Alaska, USA.
- Parikh, G.L., J.L. Etchart, R. O'Shaughnessy, L.A. Harveson, C.E. Gonzalez, F. Hernandez, and **J.W. Cain III**. 2023. Multi-scale habitat selection of desert bighorn sheep and sympatric non-native Barbary sheep in west Texas. 13<sup>th</sup> International Mammalogical Congress, Anchorage, Alaska, USA
- \*Boyle, S.T., **J.W. Cain III**, F. Abadi, N. Tatman, S. Liley, J. deVos, and J. Avey. 2023. Elk demographics within a multi-predator system including the recovery of the Mexican gray wolf. 13<sup>th</sup> International Mammalogical Congress, Anchorage, Alaska, USA.
- \***Cain, J.W. III**, C.J. Thompson, N.M. Tatman, and Z. Farley. 2023. Predation risk from recovering Mexican gray wolf populations influences resource selection and behavior of elk in the southwestern United States. 15<sup>th</sup> Biennial Deer and Elk Workshop, Flagstaff, Arizona, USA.
- \*Olson, J., **J.W. Cain III**, N.M. Tatman, S.G. Liley, and J.C. deVos. 2023. Quantifying elk foraging strategies on a multi-predator landscape. 15<sup>th</sup> Biennial Deer and Elk Workshop, Flagstaff, Arizona, USA.
- \*Martinez, S.I., **J.W. Cain III**, N.M. Tatman, S.G. Liley, and J.C. deVos. 2023. Estimating kill rates and prey composition of Mexican gray wolves and cougars in New Mexico and Arizona. 15<sup>th</sup> Biennial Deer and Elk Workshop, Flagstaff, Arizona, USA.
- \*Boyle, S., **J.W. Cain III**, F.A. Gebreselassie, N.M. Tatman, S.G. Liley, and J.C. deVos. 2023. Mortality Risk of elk in the Southwestern United States. 15<sup>th</sup> Biennial Deer and Elk Workshop, Flagstaff, Arizona, USA.
- \*Evans, A.D., B. Banulis, N. Perry, C.R. Anderson, Jr., and **J.W. Cain III**. 2023. The effects of wildland recreation on desert bighorn sheep in western Colorado. 57<sup>th</sup> Meeting of the Desert Bighorn Council, Alpine, Texas, USA (Poster)
- \*Parikh, G.L., J.L. Etchart, R. O'Shaughnessy, L.A. Harveson, C.E. Gonzalez, F. Hernandez, and **J.W. Cain III**. 2023. Multiscale habitat selection of desert bighorn sheep (*Ovis*

- canadensis mexicana*) and sympatric non-native aoudad (*Ammotragus lervia*) in a west Texas mountain range. 57<sup>th</sup> Meeting of the Desert Bighorn Council, Alpine, Texas, USA.
- \*Ruhl, C., **J.W. Cain III**, E.M. Rominger, F.A. Gebreselassie, and J.D. Hennig. 2023. Improving population estimates for desert bighorn sheep in New Mexico through double observer sightability modeling and the estimation of residual heterogeneity. 57<sup>th</sup> Meeting of the Desert Bighorn Council, Alpine, Texas, USA.
- \*Evans, A.D., B. Banulis, N. Perry, C.R. Anderson, and **J.W. Cain III**. 2023. The effects of wildland recreational disturbance on desert bighorn sheep in western Colorado. Joint Annual Meeting of Arizona/New Mexico Chapters of The Wildlife Society, Farmington, New Mexico, USA.
- \*Boyle, S., **J.W. Cain III**, F.A. Gebreselassie, N.M. Tatman, S.G. Liley, and J.C. deVos. 2023. Mortality Risk of elk in the Southwestern United States. Joint Annual Meeting of Arizona/New Mexico Chapters of The Wildlife Society, Farmington, New Mexico, USA.
- \*White, L.M., **J.W. Cain III**, F. Abadi, J.S. Lewis, R.R. Parmenter. 2023. Effects of wildfire and forest management on large mammal distribution, habitat use, and co-occurrence in the Jemez Mountains of New Mexico. Joint Annual Meeting of Arizona/New Mexico Chapters of The Wildlife Society, Farmington, New Mexico, USA.
- \*Kirby, A., C. Britt, G. Roemer, **J.W. Cain III**, and M.E. Gompper. 2023. Effects of rabbit hemorrhagic disease virus 2 (RHDV2) emergence on population estimates and exposure outcomes of New Mexican lagomorphs. Joint Annual Meeting of Arizona/New Mexico Chapters of The Wildlife Society, Farmington, New Mexico, USA.
- \*Ennis, J.R., **J.W. Cain III**, and A. Opatz. 2023. Multi-scale habitat selection by pronghorn during spring migration in northern New Mexico. Joint Annual Meeting of Arizona/New Mexico Chapters of The Wildlife Society, Farmington, New Mexico, USA.
- \*Parikh, G.L., J.L. Etchart, R. O'Shaughnessy, L.A. Harveson, and **J.W. Cain III**. 2023. Feeding habits of sympatric aoudad (*Ammotragus lervia*) and desert bighorn sheep (*Ovis canadensis mexicana*) in west Texas. Joint Annual Meeting of Arizona/New Mexico Chapters of The Wildlife Society, Farmington, New Mexico, USA.
- \*Olson, J., **J.W. Cain III**, N.M. Tatman, S.G. Liley, and J.C. deVos. 2023. Quantifying elk foraging strategies on a multi-predator landscape. Joint Annual Meeting of Arizona/New Mexico Chapters of The Wildlife Society, Farmington, New Mexico, USA.
- \*Padilla, C.J., J.T. Martin, **J.W. Cain III**, and M.E. Gompper. 2023. Drivers of flea parasitism on deer mice in a fire-prone mixed-conifer forest. Joint Annual Meeting of Arizona/New Mexico Chapters of The Wildlife Society, Farmington, New Mexico, USA.
- \*Martinez, S.I., **J.W. Cain III**, N.M. Tatman, S.G. Liley, and J.C. deVos. 2023. Estimating kill rates and prey composition of Mexican gray wolves and cougars in New Mexico and Arizona. Joint Annual Meeting of Arizona/New Mexico Chapters of The Wildlife Society, Farmington, New Mexico, USA.
- \*Kauffman, M., B. Lowrey, J. Berg, S. Bergen, D.E. Bird, **J.W. Cain**, M. Cowardin, M. Devivo, M. Flenner, J. Fort, E. Gelzer, E. Greenspan, M. Laforge, J. McKee, J. Merkle, B. Oates, L. Olson, C. Reddell, R. Ritson, H. Sawyer, C. Schroeder, and J. Shapiro. 2022. A collaborative effort to map ungulate migrations and advance their conservation across the western United States. 29<sup>th</sup> Annual Conference of The Wildlife Society, Spokane, Washington, USA.
- \*Evans, A.D., B. Banulis, N. Perry, C.R. Anderson, and **J.W. Cain III**. 2022. The effects of wildland recreational disturbance on desert bighorn sheep in western Colorado. 29<sup>th</sup> Annual Conference of The Wildlife Society, Spokane, Washington, USA. (POSTER)
- \*Thompson, C.J., **J.W. Cain III**, N.M. Tatman, S.G. Liley, J.C. deVos, and J. Avey. 2022. Evaluating predation risk from Mexican gray wolves on elk habitat selection. 29<sup>th</sup> Annual Conference of The Wildlife Society, Spokane, Washington, USA.

- \*White, L.M., F. Abadi, R.R. Parmenter, J.S. Lewis, and **J.W. Cain III**. 2022. Influence of wildfire and forest management on large mammal distribution, habitat use, and co-occurrence in the Jemez Mountains of New Mexico. 29<sup>th</sup> Annual Conference of The Wildlife Society, Spokane, Washington, USA. (POSTER)
- \*Prude, C.H., **J.W. Cain III**, and G. Harris. 2022. Habitat heterogeneity in the Chihuahuan Desert and puma diet diversity. 29<sup>th</sup> Annual Conference of The Wildlife Society, Spokane, Washington, USA.
- \*Prude, C.H., **J.W. Cain III**, G. Harris, and B. Jansen. 2022. Do water developments influence the distribution of puma kills? 29<sup>th</sup> Annual Conference of The Wildlife Society, Spokane, Washington, USA.
- \*Ennis, J.R., and **J.W. Cain III**. 2022. Elk and mule deer spring migration in New Mexico: movement strategies for navigating through a monsoonal landscape. 10<sup>th</sup> International Deer Biology Congress. Osijek, Croatia.
- \***Cain, J.W. III**, C.J. Thompson, and Z. Farley. 2022. Predation risk from recovering Mexican gray wolf (*Canis lupus baileyi*) populations influences resource selection and behavior of elk (*Cervus canadensis*) in the southwestern United States. 10<sup>th</sup> International Deer Biology Congress. Osijek, Croatia.
- \*Ennis, J.R., and **J.W. Cain III**. 2022. Pronghorn resource selection and migration through high-elevation forests in northern New Mexico. 29<sup>th</sup> Pronghorn Workshop. Deadwood, South Dakota, USA.
- \*Kirby, A., C. Britt, **J.W. Cain III**, and M.E. Gompper. 2022. Effects of rabbit hemorrhagic disease virus 2 (RHDV2) emergence on population estimates of New Mexican lagomorphs. 101<sup>st</sup>. Annual Meeting of the American Society of Mammalogists, Tucson, Arizona, USA.
- \*Thompson, C.J., **J.W. Cain III**, N.M. Tatman, S.G. Liley, J.C deVos, and J. Avey. 2022. Influence of Mexican wolves on elk habitat selection. 101<sup>st</sup>. Annual Meeting of the American Society of Mammalogists, Tucson, Arizona, USA.
- \*Parikh, G.L., **J.W. Cain III**, J.L. Etchart, R. O'Shaughnessy, and L.A. Harveson. 2022. Seasonal foraging trends in two sympatric ungulates. 101<sup>st</sup>. Annual Meeting of the American Society of Mammalogists, Tucson, Arizona, USA.
- \*Farley, Z., **J.W. Cain III**, N.M. Tatman, S.G. Liley, J.C. deVos, and J. Avey. 2022. Influence of predation risk from the recovering Mexican wolf population on elk behavior. 101<sup>st</sup>. Annual Meeting of the American Society of Mammalogists, Tucson, Arizona, USA.
- Karish, T., G.W. Roemer, D.K. Delaney, and **J.W. Cain III\***. 2022. Habitat selection and water dependency of feral burros in the Mojave Desert. 101<sup>st</sup> Annual Meeting of the American Society of Mammalogists, Tucson, Arizona, USA.
- \*Prude, C.H., **J.W. Cain III**, and G. Harris. 2022. Habitat heterogeneity in the Chihuahuan Desert and puma diet diversity. 13<sup>th</sup> Mountain Lion Workshop, Virtual Online.
- \*Prude, C.H., **J.W. Cain III**, G. Harris, and B. Jansen. 2022. Do water developments influence the distribution of puma kills? 13<sup>th</sup> Mountain Lion Workshop, Virtual Online.
- \*Lichwa, E., C. Piper, G. Fuller, **J.W. Cain III**, and M.S. Gunther. 2022. Ecological and social drivers of Mexican gray wolf (*Canis lupus baileyi*) home range patterns and size across spatiotemporal scales. 2022 Annual Meeting of the Western Section of The Wildlife Society, Reno, Nevada. USA.
- \*Thompson, C.J., **J.W. Cain III**, N.M. Tatman, S.G. Liley, J.C deVos, and J. Avey. 2021. Influence of Mexican wolves on elk resource selection. 14<sup>th</sup> Biennial Deer and Elk Workshop. Online Virtual.
- \*Farley, Z., **J.W. Cain III**, N.M. Tatman, S.G. Liley, J.C deVos, and J. Avey. 2021. Assessing the impacts of the recovering Mexican wolf population on elk behavior. 14<sup>th</sup> Biennial Deer and Elk Workshop. Online Virtual.

- \*Etchart, J. L., C. E. Gonzalez, L. A. Harveson, and **J.W. Cain III**. Evaluating water use of desert bighorn sheep and aoudad in the Sierra Vieja Mountains, Texas. 56<sup>th</sup> Meeting of the Desert Bighorn Council, Virtual Online.
- \*Prude, C.H., **J.W. Cain III**, G. Harris, and B. Jansen. 2021. Do water developments influence the distribution of puma kills? 56<sup>th</sup> Meeting of the Desert Bighorn Council, Virtual Online.
- \*Evans, A.D., **J.W. Cain III**, B. Banulis, N. Perry, and C. Anderson. 2021. Effects of wildland recreational disturbance on desert bighorn sheep in western Colorado. 56<sup>th</sup> Meeting of the Desert Bighorn Council, Virtual Online.
- \*Prude, C.H., **J.W. Cain III**, G. Harris, and B. Jansen. 2021. The influence of man-made water sources on puma kill site locations and prey composition. 54<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Virtual Online.
- \*Farley, Z., **J.W. Cain III**, N.M. Tatman, S.G. Liley, J.C deVos, and J. Avey. 2021. Assessing the impacts of the recovering Mexican wolf population on elk behavior. 54<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Virtual Online.
- \*White, L., **J.W. Cain III**, F. A. Gabreselassie, J.S. Lewis, and R. Parmenter. 2021. Effects of wildfire and forest management on large mammal distribution, habitat use, and co-occurrence in the Jemez Mountains of New Mexico. 54<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Virtual Online.
- \*Evans, A.D., **J.W. Cain III**, B. Banulis, N. Perry, and C. Anderson. 2021. Effects of human recreation on desert bighorn sheep (*Ovis canadensis nelsoni*) in western Colorado. 54<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Virtual Online.
- \*Boyle, S.T., **J.W. Cain III**, N.M. Tatman, S.G. Liley, J.C deVos, and J. Avey. 2021. Elk mortality risk in the Mexican Wolf Recovery Area. 54<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Virtual Online.
- \*Ennis, J.R., **J.W. Cain III**, N. Tatman, O. Duvuvuei, and A. Opatz. 2021. Elk, mule deer, and pronghorn migration in a high-elevation monsoonal landscape. 54<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Virtual Online.
- \*Thompson, C.J., **J.W. Cain III**, N.M. Tatman, S.G. Liley, J.C deVos, and J. Avey. 2020. Influence of Mexican wolves on elk resource selection. 8<sup>th</sup> Natural History of the Gila Symposium, Silver City, New Mexico, USA.
- \*Farley, Z., **J.W. Cain III**, N.M. Tatman, S.G. Liley, J.C deVos, and J. Avey. 2020. Assessing the impacts of a recovering predator on prey vigilance. 8<sup>th</sup> Natural History of the Gila Symposium, Silver City, New Mexico, USA.
- \*Prude, C.H., **J.W. Cain III**, and G. Harris. 2020. Habitat heterogeneity in the Chihuahuan Desert and puma diet diversity. 53<sup>rd</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Prescott, Arizona, USA.
- Roerick, T.M., and **J.W. Cain III**. 2020. Habitat selection by female mule deer in relation to prescribed fire, forest thinning and wildfires. 53<sup>rd</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Prescott, Arizona, USA.
- \*Boyle, S.T., **J.W. Cain III**, N.M. Tatman, S.G. Liley, J.C deVos, and J. Avey. 2020. Cause-specific Mortality and Survival of Elk in the Mexican Wolf Recovery Area in New Mexico and Arizona. 53<sup>rd</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Prescott, Arizona, USA.
- \*Farley, Z., **J.W. Cain III**, N.M. Tatman, S.G. Liley, J.C deVos, and J. Avey. 2020. Assessing the impacts of a recovering predator population on prey behavior. 53<sup>rd</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Prescott, Arizona, USA.
- \*Thompson, C.J., **J.W. Cain III**, N.M. Tatman, S.G. Liley, J.C deVos, and J. Avey. 2020. Influence of Mexican wolves on elk resource selection. 53<sup>rd</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Prescott, Arizona, USA.

- \*Foreman, N. and **J.W. Cain III**. 2019. Overcoming Challenges of Furbearer Research in the Southwestern United States. 2019 Joint Annual Conference of the American Fisheries Society and the Wildlife Society, Reno, Nevada, USA.
- \*Ruhl, C.Q., **J.W. Cain III**, E.M. Rominger, and N.M. Tatman. 2019. Improving desert bighorn population estimates using a hybrid model from aerial survey data. 7<sup>th</sup> World Mountain Ungulate Conference. Bozeman, Montana, USA
- \*Gedir, J.V., **J.W. Cain III**, T.L. Swetnam, P.R. Krausman, and J.R. Morgart 2019. Extreme drought and adaptive habitat selection by desert bighorn sheep. 7<sup>th</sup> World Mountain Ungulate Conference. Bozeman, Montana, USA
- Gedir, J.V., **J.W. Cain III**, T.L. Swetnam, P.R. Krausman, and J.R. Morgart 2019. Extreme drought and adaptive resource selection by a desert ungulate. 99<sup>th</sup> Annual Meeting of the American Society of Mammalogists. Washington DC, USA
- \*Smythe, S.E., **J.W. Cain III**, and W.C. Conway. 2019. Ungulate Forage Biomass and Quality During 6 Years of Landscape Restoration. 13<sup>th</sup> Biennial Western States and Provinces Deer and Elk Workshop. Marfa, Texas, USA.
- Gedir, J.V., **J.W. Cain III**, T.L. Swetnam, P.R. Krausman, and J.R. Morgart 2019. Extreme drought and adaptive habitat selection by desert bighorn sheep. 55<sup>th</sup> Meeting of the Desert Bighorn Council. Mesquite, Nevada, USA
- \*Smythe, S.E., **J.W. Cain III**, W.C. Conway, and M.A. Peyton. 2019. Changes in forage biomass for elk and mule deer following 6 years of landscape scale forest restoration and monitoring in the Jemez Mountains, NM. Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Albuquerque, New Mexico, USA.
- \*Smythe, S.E., **J.W. Cain III**, W.C. Conway, and M.A. Peyton. 2019. Changes in forage biomass for elk and mule deer following 6 years of landscape scale forest restoration and monitoring in the Jemez Mountains, NM. Annual Meeting of the Texas Chapter of The Wildlife Society, Montgomery, Texas, USA.
- \*Tatman, N.T., S.G. Liley, **J.W. Cain III**, and J.W. Pitman. 2018. Effects of calf predation and nutrition on elk vital rates in New Mexico. International Deer Biology Congress, Estes Park, Colorado, USA.
- Roerick, T.M., and **J.W. Cain III**. 2018. Forest restoration, wildfire and habitat selection by female mule deer. International Deer Biology Congress, Estes Park, Colorado, USA.
- \*Kay, J.H., **J.W. Cain III**, and S.G. Liley. 2018. Tradeoffs between forage and predation risk in central New Mexico. International Deer Biology Congress, Estes Park, Colorado, USA.
- \*Yiu, S.W., N. Owen-Smith, **J.W. Cain III**, and F. Parrini. 2018. How do lions hunt at night? Savanna Science Network Meeting, Skukuza, South Africa.
- \*Tatman, N.T., S.G. Liley, **J.W. Cain III**, and J.W. Pitman. 2018. Effects of calf predation and nutrition on elk vital rates. 13<sup>th</sup> Western Black Bear Workshop, Grand Junction, Colorado.
- \*Ramsey, C.L., W.C. Conway, R.D. Cox, R.D. Bradley, **J.W. Cain III**. 2018. Available forage and vegetative structure in the northern Sacramento Mountains, and the potential impact on neonatal pronghorn survival. 51<sup>st</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Flagstaff, Arizona, USA.
- \*Smythe, S.E., **J.W. Cain III**, W.C. Conway, M.A. Peyton, and L. Bernal. 2018. Factors influencing calf bed site selection in a landscape changed by wildfire and restoration. 51<sup>st</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Flagstaff, Arizona, USA.
- \*Ramsey, C.L., W.C. Conway, R.D. Cox, R.D. Bradley, **J.W. Cain III**. 2018. Available forage and vegetative structure in the northern Sacramento Mountains, and the potential impact on neonatal pronghorn survival. Annual Meeting of the Texas Chapter of The Wildlife Society, Dallas, Texas, USA.

- \*Smythe, S.E., **J.W. Cain III**, W.C. Conway, M.A. Peyton, and L. Bernal. 2018. Factors influencing calf bed site selection in a landscape changed by wildfire and restoration. Annual Meeting of the Texas Chapter of The Wildlife Society, Dallas, Texas, USA.
- \*Menefee, A.R., S.E. Smythe, **J.W. Cain III**, W.C. Conway. 2017. Stem densities of *Populus tremuloides* in aspen managed wildfire plots and not treated plots in northern New Mexico. Annual Meeting of the Texas Section of the Society for Range Management. San Angelo, Texas, USA.
- \*Oakleaf, J.K., **J.W. Cain III**, C.M. Gardner, S. Barrett, C.B. Piper. 2017. Survival and dispersal rates of Mexican wolves. 24<sup>th</sup> Annual Conference of the Wildlife Society, Albuquerque, New Mexico, USA.
- \*Goljani, R., J.K. Frey, D.L. Bergman, S.W. Breck, **J.W. Cain III**, J. Oakleaf, J.B. Smith. 2017. Predicting spatial factors associated with livestock depredations by the Mexican wolf in Arizona and New Mexico. 24<sup>th</sup> Annual Conference of the Wildlife Society, Albuquerque, New Mexico, USA.
- \*Karish, T., G.W. Roemer, and **J.W. Cain III**. 2017. Resource selection and movements of feral burros on the Fort Irwin National Training Center. 24<sup>th</sup> Annual Conference of the Wildlife Society, Albuquerque, New Mexico, USA. (POSTER)
- \*Prude, C.H., **J.W. Cain III**, and G. Harris. 2017. The influence of anthropogenic water on puma habitat use and prey selection in arid ecosystems. 24<sup>th</sup> Annual Conference of the Wildlife Society, Albuquerque, New Mexico, USA. (POSTER)
- \*Bard, S.M. and **J.W. Cain III**. 2017. Influence of natural and anthropogenic disturbances on multi-scale black bear habitat selection. 24<sup>th</sup> Annual Conference of the Wildlife Society, Albuquerque, New Mexico, USA. (POSTER)
- \*Anaya, A.J., **J.W. Cain III**, J.R. Biggs, and M. Peyton. 2017. Mountain lion (*Puma concolor*) Kill rates and competition with black bears (*Ursus americanus*) in New Mexico. 24<sup>th</sup> Annual Conference of the Wildlife Society, Albuquerque, New Mexico, USA.
- \*Smythe, S.E., **J.W. Cain III**, W.C. Conway, M.A. Peyton, and R.R. Parmenter. 2017. Influence of movement and resource use on reproductive success of elk in a restored landscape. 24<sup>th</sup> Annual Conference of the Wildlife Society, Albuquerque, New Mexico, USA. (POSTER)
- \*Reddell, C.D., G.W. Roemer, and **J.W. Cain III**. 2017. The adaptability and disease patterns of an urban coyote population in the Mojave Desert. 24<sup>th</sup> Annual Conference of the Wildlife Society, Albuquerque, New Mexico, USA. (POSTER)
- \*Kay, J.H., and **J.W. Cain III**. 2017. Effects of sampling time on bone marrow fat estimates. 24<sup>th</sup> Annual Conference of the Wildlife Society, Albuquerque, New Mexico, USA.
- \*Gedir, J.V., **J.W. Cain III**, J.K. Oakleaf, S.W. Breck, and E.S. Rubin. 2017. Can sustainable populations of reintroduced large carnivores exist beyond large protected areas without ongoing conservation management? 24<sup>th</sup> Annual Conference of the Wildlife Society, Albuquerque, New Mexico, USA.
- \*Buchalski, M., C. Epps, W. Boyce, M. Matocq, R. Crowhurst, B. Holton, L. Thompson, E. Rubin, and **J.W. Cain III**. 2017. Environmental adaptation in desert bighorn sheep throughout their North American range. 2017 Biennial Meeting of the Desert Bighorn Council, St. George, Utah, USA.
- \*Kay, J.H., and **J.W. Cain III**. 2017. New insight into utilizing bone marrow to assess the health of mountain lion prey. 12<sup>th</sup> Mountain Lion Workshop, Estes Park, Colorado, USA.
- \*Prude, C.H., **J.W. Cain III**, and G. Harris. 2017. The influence of anthropogenic water on puma habitat use and prey selection in arid ecosystems. 12<sup>th</sup> Mountain Lion Workshop, Estes Park, Colorado, USA. (Poster)
- \*Murphy, S.M., **J.W. Cain III**, D. Wilckens, G. Roemer, R. Lonsinger, and M. Peyton. 2017. Developing novel spatial capture-recapture survey designs for estimating management-scale cougar density in New Mexico, USA. 12<sup>th</sup> Mountain Lion Workshop, Estes Park, Colorado, USA.

- \*Kay, J.H., and **J.W. Cain III**. 2017. New insight into utilizing bone marrow to assess ungulate health. 12<sup>th</sup> Western States and Provinces Deer and Elk Workshop, Sun Valley, Idaho, USA.
- Gedir, J.V., \***J.W. Cain III**, P.R. Krausman, J.D. Allen, G.C. Duff, and J.R. Morgart. 2017. Potential foraging decisions by desert bighorn sheep to balance water and nutrient intake. 2017 Biennial Meeting of the Desert Bighorn Council, St. George, Utah, USA.
- \*Rossettie, T., T. Perry, **J.W. Cain III**, and R. Alonso. 2017. Spatial density estimations of *Puma concolor* by remote cameras and a novel hair sampling method. 12<sup>th</sup> Mountain Lion Workshop, Estes Park, Colorado, USA. (Poster)
- \*Tatman-Quintana, N., S. Liley, **J.W. Cain III**, and J.W. Pitman. 2017. Evaluating effects of nutrition and predation on an elk population in New Mexico. 12<sup>th</sup> Western States and Provinces Deer and Elk Workshop, Sun Valley, Idaho, USA.
- \*Kay, J.H., and **J.W. Cain III**. 2017. New insight into utilizing bone marrow to assess ungulate health. 50<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Farmington, New Mexico, USA.
- \*Anaya, A.J., **J.W. Cain III**, J.R. Biggs, and M. Peyton. 2017. Mountain Lion (*Puma concolor*) Resource Selection, Kill Rates and Competition with Black Bears (*Ursus americanus*) in the Jemez Mountains, New Mexico. 50<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Farmington, New Mexico, USA. (POSTER)
- \*Smythe, S.E., **J.W. Cain III**, W.C. Conway, M.A. Peyton, and R.R. Parmenter. 2017. Movement, resource use, and reproductive success of elk in response to competition, predation risk, and landscape restoration. 50<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Farmington, New Mexico, USA. (POSTER)
- \*Threadgill, C.L., W.C. Conway, R.D. Cox, R.D. Bailey, and **J.W. Cain III**. 2017. Pronghorn fawn survival and recruitment in a localized pronghorn population in southeast New Mexico. 50<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Farmington, New Mexico, USA. (POSTER)
- \*Smythe, S.E., **J.W. Cain III**, W.C. Conway, M.A. Peyton, and R.R. Parmenter. 2017. Movement, resource use, and reproductive success of elk in response to competition, predation risk, and landscape restoration. Annual Meeting of the Texas Chapter of The Wildlife Society, San Antonio, Texas, USA. (POSTER)
- \*Threadgill, C.L., W.C. Conway, R.D. Cox, R.D. Bailey, and **J.W. Cain III**. 2017. Pronghorn fawn survival and recruitment in a localized pronghorn population in southeast New Mexico. Annual Meeting of the Texas Chapter of The Wildlife Society, San Antonio, Texas, USA. (POSTER)
- Gedir, J.V., \***J.W. Cain III**, P.R. Krausman, J.D. Allen, G.C. Duff, and J.R. Morgart. 2016. Potential foraging decisions by desert bighorn sheep to balance water and nutrient intake in a water-stressed environment. 23<sup>rd</sup> Annual Conference of the Wildlife Society, Raleigh, North Carolina, USA.
- \*Gedir, J.V., **J.W. Cain III**, G. Harris, and T.T. Turnbull. 2016. Predicting long-term pronghorn population dynamics in the Southwest in response to climate change. 27<sup>th</sup> Biennial Western States and Provinces Pronghorn Workshop, Anaconda, Montana, USA.
- \*Bard, S.M., and **J.W. Cain III**. 2016. Influence of natural and anthropogenic disturbance on multi-scale black bear habitat selection. 49<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Flagstaff, Arizona, USA.
- \*Kay, J. H., and **J. W. Cain III**. 2016. Top-Down and bottom-up forces on central New Mexico mule deer. 49<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Flagstaff, Arizona, USA.
- \*Roberts, C., R. Cox, and **J.W. Cain III**. 2016. Fine-scale temporal modeling of elk (*Cervus canadensis*) habitat selection. 68<sup>th</sup> Annual Meeting of the Society for Range Management, Sacramento, California.



- \*Humagain, K. C. Portillo, R. Cox, and **J.W. Cain III**. 2016. Mapping structural diversity of trees in the southwest Jemez Mountains of New Mexico using Landsat-8 data. 68<sup>th</sup> Annual Meeting of the Society for Range Management, Sacramento, California. (POSTER)
- \*Gould, M.J., **J.W. Cain III**, G.W. Roemer, W.R. Gould, and S.G. Liley. 2015. Estimating density of American black bears in New Mexico, United States of America. 5<sup>th</sup> International Wildlife Management Congress, Sapporo, Japan.
- \*Gedir, J.V., **J.W. Cain III**, G. Harris, and T.T Turnbull. 2015. Predicting long-term population dynamics of an ungulate in an arid environment in response to climate change. 5<sup>th</sup> International Wildlife Management Congress, Sapporo, Japan.
- \***Cain, J.W., III**, J. V. Gedir, P.R. Krausman, J.D. Allen, and G.C. Duff. 2015. Extreme precipitation variability, forage quality and large herbivore diet selection in arid environments. 5<sup>th</sup> International Wildlife Management Congress, Sapporo, Japan.
- \*Kindschuh, S.R., and **J.W. Cain III**. 2015. Black bear carnivory of ungulates: global positioning system cluster analysis as a tool for estimation. 12<sup>th</sup> Western Black Bear Workshop, Canmore, Alberta, Canada.
- Karsch, R.C., \***J.W. Cain III**, E.M. Rominger, E.J. Goldstein. 2015. Desert bighorn lambing habitat revisited: environmental characteristics at female parturition sites, and lamb nursery and predation sites. 2015 Biennial Meeting of the Desert Bighorn Council, Borrego Springs, California, USA.
- \*Ashling, J.B., J.W. Cain III, S.G. Liley. 2015. Survival, cause-specific mortality, and habitat selection of mule deer in southern New Mexico. 48<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Las Cruces, New Mexico, USA.
- \*Gedir, J.V., **J.W. Cain III**, G. Harris, and T.T Turnbull. 2015. Predicting long-term pronghorn population dynamics in the southwest U.S.A. in response to climate change. 48<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Las Cruces, New Mexico, USA.
- \*Gould, M.J., **J.W. Cain III**, G.W. Roemer, and W.R. Gould. 2015. Estimating abundance and density of American black bears (*Ursus americanus*) in New Mexico using noninvasive genetic sampling-based capture-recapture methods. 48<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Las Cruces, New Mexico, USA.
- \*Karsch, R.C., **J.W. Cain III**, E.M. Rominger, E.J. Goldstein. 2015. Parturient desert bighorn sheep survival strategies: environmental characteristics at female parturition sites and lamb nursery and predation sites. 48<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Las Cruces, New Mexico, USA.
- \*Kindschuh, S.R., and **J.W. Cain III**. 2015. Modeling black bear predation and scavenging using GPS cluster analysis. 48<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Las Cruces, New Mexico, USA.
- \***Cain, J.W., III**, J. V. Gedir, P.R. Krausman, J.D. Allen, and G.C. Duff. 2014. Forage nutritional content and diet selection by desert bighorn sheep across widely varying climatic conditions. 21<sup>st</sup> Annual Conference of The Wildlife Society, Pittsburgh, Pennsylvania, USA.
- \*Gould, M.J., **J.W. Cain III**, G.W. Roemer, and W.R. Gould. 2014. Estimating abundance and density of American black bears in New Mexico using noninvasive genetic sampling-based capture-recapture methods. 21<sup>st</sup> Annual Conference of The Wildlife Society, Pittsburgh, Pennsylvania, USA.
- \*O'Shaughnessy, R., J. French, N. Owen-Smith, L.A. Harveson, **J.W. Cain III**, and S.S Gray. 2014. Towards a universal method for estimating ruminant diet from feces. 26<sup>th</sup> Biennial Pronghorn Workshop, Alpine, Texas, USA.
- \*Karsch, R., **J.W. Cain III**, E. Goldstein, and R. Rominger. 2014. Desert bighorn sheep lamb survival and cause-specific mortality in the Peloncillo Mountains, New Mexico. 47<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Pinetop, Arizona, USA.

- \*Gould, M.J., **J.W. Cain III**, G.W. Roemer, W.R. Gould, and S.G. Liley. 2014. Estimating the abundance and density of American black bears (*Ursus americanus*) in New Mexico using non-invasive genetic analysis. 47th Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Pinetop, Arizona, USA.
- \*Garrison, K., **J.W. Cain III**, E. Goldstein, and R. Rominger. 2014. Influence of sympatric livestock grazing on desert bighorn sheep forage resources and foraging behavior. 47th Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Pinetop, Arizona, USA.
- \*Kindschuh, S.R., **J.W. Cain III**, and M.A. Peyton. 2014. Evaluating the use of GPS cluster analysis to locate black bear predation and scavenging sites. 47th Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Pinetop, Arizona, USA.
- \*Munro, K.J., **J.W. Cain**, and G.W. Roemer 2013. Movements and space-use of golden eagles (*Aquila chrysaetos*) from Southern New Mexico. New Mexico Ornithological Society, Silver City, New Mexico.
- \*Kramer, D. C. Taylor, G. Sorenson, R. Cox, P. Gipson, and **J. Cain**. 2013. The effects of thinning and ungulate exclusion on conifer understory vegetation and key mule deer forage species in northeastern New Mexico, USA. 98th Annual Meeting of the Ecological Society of America, Minneapolis, Minnesota.
- \***Cain, J.W., III**, P.R. Krausman, J.D. Allen, and G.C. Duff. 2013. Climatic variability and nutritional content of desert bighorn sheep forage in southwestern Arizona. Desert Bighorn Council Meeting, Las Cruces, New Mexico, USA.
- \*Karsch, R., **J.W. Cain III**, E.M. Rominger, and E.J. Goldstein. 2013. Desert bighorn sheep lamb survival and cause-specific mortality in the Peloncillo Mountains, New Mexico. Desert Bighorn Council Meeting, Las Cruces, New Mexico, USA.
- \*Garrison, K.R., **J.W. Cain III**, E.M. Rominger, and E.J. Goldstein. 2013. Influence of livestock grazing on forage biomass, activity budgets and foraging efficiency of desert bighorn sheep (*Ovis canadensis mexicana*) in southern New Mexico. Desert Bighorn Council Meeting, Las Cruces, New Mexico, USA.
- \***Cain, J.W., III**, R. Parmenter, S.R. Kindschuh, and M.A. Peyton. 2013. Wildfire, Forest Restoration, and Mammal Monitoring in the Southwest Jemez Mountains, New Mexico. 46th Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Albuquerque, New Mexico, USA
- \*Kindschuh, S.R., **J.W. Cain III**, and M.A. Peyton. 2013. Evaluating the use of GPS cluster analysis to locate black bear predation and scavenging sites. 46th Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Albuquerque, New Mexico, USA (POSTER)
- \*Munro, K.M., **J.W. Cain III**, and G.W. Roemer. 2013. Movements and habitat/space use of Golden Eagles (*Aquila chrysaetos*) from southern New Mexico. 46th Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Albuquerque, New Mexico, USA.
- \*Gould, M. J., **J.W. Cain III**, G.W. Roemer, W.R. Gould, and S.G. Liley. 2013. Estimating the abundance and density of American black bears (*Ursus Americanus*) in New Mexico using non-invasive genetic analysis. 46th Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Albuquerque, New Mexico, USA.
- \*Garrison, K.R., and **J.W. Cain III**. 2013. Influence of livestock grazing on forage biomass, activity budgets and foraging efficiency of desert bighorn sheep (*Ovis canadensis mexicana*) in southern New Mexico. 46th Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Albuquerque, New Mexico, USA.
- \*Pitman, J.W., **J.W. Cain III**, S.G. Liley, W.R. Gould, and N.M. Quintana. 2013. Microhabitat selection and mortality site characteristics of elk calves in areas of differing predator composition in New Mexico. 46th Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Albuquerque, New Mexico, USA.

- \*Pitman, J.W., **J.W. Cain III**, S.G. Liley, W.R. Gould, and N.M. Quintana. 2012. Micro-habitat selection and mortality site characteristics of elk calves in the Blue Range Wolf Recovery Area of west-central New Mexico. 19<sup>th</sup> Annual Conference of The Wildlife Society, Portland, Oregon, USA. (POSTER)
- \*Quintana, N.T., W.B. Ballard, S. Liley, P. Gibson, S. Breck, **J. Cain**, J. Oakleaf, D.L. Bergman, and J.W. Pitman. 2012. Elk calf mortality patterns in the blue range wolf recovery area, New Mexico. 48<sup>th</sup> Annual Meeting of the Texas Chapter of The Wildlife Society, Fort Worth, Texas, USA.
- \*Sorensen, G.E., W.B. Ballard, P. Gibson, R. Cox, **J. Cain**, S. Liley, and W. Armacost. 2012. Adult female mule deer habitat selection and survival following habitat enhancements in north-central New Mexico. 48<sup>th</sup> Annual Meeting of the Texas Chapter of The Wildlife Society, Fort Worth, Texas, USA.
- \*Pitman, J.W., **J.W. Cain III**, S. Liley, W.R. Gould, W. Ballard, and N.T. Quintana. 2012. Cause-specific mortality and microhabitat selection of elk calves in the Blue Range Wolf Recovery Area. 45<sup>th</sup> Joint Annual Meeting of the Arizona/New Mexico Chapters of The Wildlife Society, Phoenix, Arizona, USA.
- \*Lewis, J.D., **J.W. Cain III**, and R. Denkhaus. 2012. Habitat selection of an American alligator (*Alligator mississippiensis*) population at the edge of their distribution range. 48<sup>th</sup> Annual Meeting of the Texas Chapter of The Wildlife Society, Fort Worth, Texas, USA.
- V.A. Macandza, N. Owen-Smith, and **\*J.W. Cain III**. 2011. Habitat and resource partitioning among tall-grass grazers: sable antelope, zebra and buffalo in Kruger National Park, South Africa. 18<sup>th</sup> Annual Conference of The Wildlife Society, Waikoloa, Hawaii, USA. (Poster)
- \*Lewis, J.D., **J.W. Cain III**, and R. Denkhaus. 2011. Habitat selection of an American alligator (*Alligator mississippiensis*) population at the edge of their distribution range. Urban Wildlife Management and Planning Conference, Austin, Texas, USA.
- \*Luedtke, C.J., M. Overstreet, **J.W. Cain III**, T. Stephenson, A.E. Justice-Allen. 2011. Prevalence of *Mycoplasma ovipneumoniae* in 6 geographically distinct populations of desert bighorn sheep in Arizona. 51<sup>st</sup> Desert Bighorn Council, Laughlin, Nevada, USA.
- \*Lewis, J.D., **J.W. Cain III**, and R. Denkhaus. 2011. Habitat selection of an American alligator (*Alligator mississippiensis*) population at the edge of their distribution range. 47<sup>th</sup> Annual Meeting of the Texas Chapter of The Wildlife Society, San Antonio, Texas, USA.
- \*Overstreet, M.W., T.R. Stephenson, and **J.W. Cain III**. 2011. Survival and recruitment of desert bighorn sheep in relation to maternal body condition on the Kofa National Wildlife Refuge, Arizona. Annual Meeting of the Arizona/New Mexico Chapter of The Wildlife Society, Pinetop, Arizona, USA. (Poster)
- \*Smith, K.N., **J.W. Cain III**, M.L. Morrison, and R.N. Wilkins. 2010. Habitat and nest outcome of black-capped vireos in the Devil's River area of Texas. Black-capped Vireo Symposium, Austin, Texas, USA.
- \***Cain, J.W., III**, N. Owen-Smith, and V. Macandza. 2010. Comparative water dependency of sable antelope and zebra in Kruger National Park. 8<sup>th</sup> Annual Kruger National Park Science Networking Meeting, Skukuza, South Africa.
- \***Cain, J.W., III**, N. Owen-Smith, and V. Macandza. 2010. Comparative water dependency of sable antelope and zebra in Kruger National Park, South Africa. 46<sup>th</sup> Annual Meeting of the Texas Chapter of The Wildlife Society, Galveston, Texas, USA.
- \***Cain, J.W., III**, N. Owen-Smith, and V. Macandza. 2009. The costs of drinking: comparative water dependency of sable antelope and zebra in Kruger National Park, South Africa. 16<sup>th</sup> Annual Conference of The Wildlife Society, Monterey, California, USA.
- \*Smith, S.M. and **J.W. Cain III**. 2008. Foraging efficiency and vigilance behavior of impala. 15<sup>th</sup> Annual Conference of the Wildlife Society, Miami, Florida, USA.

- Cain, J.W., III**, \*B.D. Jansen, R.R. Wilson, and P.R. Krausman. 2008. Thermoregulatory advantages of shade use by desert bighorn sheep. 88<sup>th</sup> Annual Meeting of the American Society of Mammalogists, Brookings, South Dakota, USA.
- \*Macandza, V., N. Owen-Smith, B.F. Erasmus, and **J.W. Cain III**. 2008. Spatial separation between low density and high density grazers: sable antelope, buffalo, and zebra in the Kruger National Park. 6<sup>th</sup> Annual Kruger National Park Science Networking Meeting, Skukuza, South Africa.
- \*Smith, S.M. and **J.W. Cain III**. 2008. Foraging efficiency and vigilance behavior of impala: the influence of herd size and distribution. Annual Meeting of the Arizona/New Mexico Chapter of The Wildlife Society, Prescott, Arizona, USA
- \***Cain, J.W., III**, P.R. Krausman, J.R. Morgart, B.D. Jansen, and M.B. Pepper. 2007. Effects of removing man-made water sources on desert bighorn sheep. 14<sup>th</sup> Annual Conference of The Wildlife Society, Tucson, Arizona, USA.
- \*Smith, S.M. and **J.W. Cain III**. 2007. Group foraging and vigilance behavior of impala. 14<sup>th</sup> Annual Conference of The Wildlife Society, Tucson, Arizona, USA. (Poster).
- \***Cain, J.W., III**, P.R. Krausman, J.R. Morgart, B.D. Jansen, and M.B. Pepper. 2007. Effects of removing man-made water sources on desert bighorn sheep. 21<sup>st</sup> Annual Meeting of the Society for Conservation Biology, Port Elizabeth, South Africa. (Poster).
- \***Cain, J.W., III**, and N. Owen-Smith. 2007. Water dependency and movements of sable antelope. 5<sup>th</sup> Annual Kruger National Park Science Networking Meeting, Skukuza, South Africa.
- \***Cain, J.W., III**, P.R. Krausman, and J.R. Morgart. 2006. Effects of removing man-made water sources on adult mortality and juvenile recruitment of desert bighorn sheep. Annual Meeting of the Arizona/New Mexico Chapter of The Wildlife Society, Flagstaff, Arizona, USA.
- \***Cain, J.W., III**, H.E. Johnson, and P.R. Krausman. 2005. Effects of wildfires on desert bighorn sheep habitat in the Santa Catalina Mountains, Arizona. 48<sup>th</sup> Annual Meeting of the Desert Bighorn Council, Alpine, Texas, USA.
- \***Cain, J.W., III**, P.R. Krausman, J.R. Morgart, and B.D. Jansen. 2004. Influence of topography and fix interval on GPS collar performance. 11<sup>th</sup> Annual Conference of The Wildlife Society, Calgary, Alberta, Canada.
- Cain, J.W., III**, \*P.R. Krausman, and J.R. Morgart. 2004. Response of desert bighorn sheep to the removal of man-made water sources. Wildlife Water Development Workshop: a review of the science, policy, and human dimensions. Tempe, Arizona, USA.
- \*Bombay, H.L., M.L. Morrison, **J.W. Cain**, and D.E. Taylor. 2003. Demographics for willow flycatchers in the central Sierra Nevada, California: 1997-2002. 10<sup>th</sup> Annual Conference of The Wildlife Society, Burlington, Vermont, USA.
- \***Cain, J.W., III**, P.R. Krausman, J.R. Morgart, and J.J. Hervert. 2003. Distribution of desert bighorn sheep in relation to forage conditions. 3<sup>rd</sup> International Wildlife Management Congress, Christchurch, New Zealand.
- \***Cain, J.W., III**, P.R. Krausman, J.R. Morgart, and J.J. Hervert. 2002. Benefits of using GPS/Satellite telemetry systems in wildlife research. Annual Meeting of the Arizona/New Mexico Chapter of The Wildlife Society, Safford, Arizona, USA.
- \***Cain, J.W., III**, P.R. Krausman, J.R. Morgart, and J.J. Hervert. 2002. Use of GPS/Satellite telemetry systems in desert bighorn sheep research. 46<sup>th</sup> Annual Meeting of the Desert Bighorn Council, Palm Springs, California, USA.
- \***Cain, J.W., III**, and M.L. Morrison. 2001. Nest success of willow flycatchers and yellow warblers in relation to predator activity in the central Sierra Nevada, California. Annual Conference of the Western Section of The Wildlife Society, Sacramento, California, USA.
- \***Cain, J.W., III**, and M.L. Morrison. 2000. Nest success of willow flycatchers and yellow warblers in relation to predator activity in the central Sierra Nevada, California. Annual Conference of the Western Section of The Wildlife Society, Riverside, California, USA.

\*Bombay, H.L., M.L. Morrison, **J. W. Cain**, and D.E. Taylor. 2000. Preliminary demographics for willow flycatchers in the central Sierra Nevada, California: 1997-2000. Conference for the Ecology and Conservation of the Willow Flycatcher, Tempe, Arizona, USA.

#### **Research Grants and Contracts** (PI or Co-PI; Current as of 1 June 2025)

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2025 – 2028	Adaptive resource selection and movements of pronghorn in relation to landscape permeability and rainfall in the Chihuahuan Desert Department of Defense	\$141,509 (Co-PI)
2025 – 2028	Adaptive Resource Selection and Movements of Pronghorn in Relation to Landscape Permeability and Rainfall in the Chihuahuan Desert Department of Defense	\$141,509 (Co-PI)
2024 – 2028	Bureau of Land Management: Identifying barriers to pronghorn ( <i>Antilocapra americana</i> ) habitat connectivity in southwestern New Mexico in relation to rangeland management and renewable energy development.	\$202,788 (PI)
2024 – 2026	U.S Fish and Wildlife Service: Predicting climate change induced range shifts for big game species in New Mexico.	\$386,050 (Co-PI)
2022 – 2025	Bureau of Land Management: Evaluating landscape permeability and connectivity for pronghorn in southwestern New Mexico.	\$85,986 (PI)
2023 – 2024	Jicarilla Apache Nation: Biological feasibility of introducing bighorn sheep to the Jicarilla Apache Nation, New Mexico, Jicarilla Apache Nation.	\$94,171 (PI)
2023 – 2025	Rocky Mountain Elk Foundation: Prediction capability of blood metabolites in estimating nutritional condition of elk.	\$22,500 (PI)
2022 – 2026	Atlas Sand Company: Kermit Conveyor System- Mule deer and pronghorn monitoring.	\$499,586 (PI)
2020 – 2024	New Mexico Department of Game and Fish. Identification and characterization of habitat conditions of mule deer, elk and pronghorn migration routes and stopover locations in northern New Mexico.	\$101,312 (PI)
2021 – 2021	Wild Sheep Foundation. Influence of recreational disturbance on desert bighorn sheep in western Colorado.	\$12,300 (PI)
2020 – 2026	US Geological Survey. Mapping Big Game Migration Corridors-New Mexico.	\$350,725 (Co-PI)
2020 – 2026	New Mexico Department of Game and Fish. Mapping Big Game Migration Corridors-New Mexico.	\$150,264 (PI)
2020 – 2024	Colorado Parks and Wildlife. Influence of recreational disturbance on desert bighorn sheep in western Colorado.	\$132,256 (PI)
2020 – 2023	Rocky Mountain Bighorn Society. Influence of recreational disturbance on desert bighorn sheep in western Colorado.	\$49,872 (PI)
2020 – 2023	Rocky Mountain Elk Foundation, Arizona Chapter. Blue Range Mexican wolf recover area elk habitat use and predation.	\$30,000 (PI)
2020 – 2022	Mule Deer Foundation. Identification and characterization of habitat conditions of mule deer migration routes and stopover locations in northern New Mexico	\$22,616 (PI)
2019 – 2020	Wild Sheep Foundation. Influence of recreational disturbance on desert bighorn sheep in western Colorado.	\$15,000 (PI)
2011 – 2025	USDA/USDIO Forest Service/Valles Caldera National Preserve. Research Cooperative Agreement. Large mammal monitoring for the southwest Jemez Mountains collaborative forest landscape restoration project.	\$1,580,467 (PI)

2019 – 2023 Rocky Mountain Elk Foundation, New Mexico Chapter. Elk demography, movements and habitat selection in the Mexican wolf recovery area year 2. \$49,500 (PI)

2019 – 2020 Arizona Elk Society. Elk demography, movements and habitat selection in the Mexican wolf recovery area in Arizona. \$15,000 (PI)

2019 – 2020 Houston Safari Club Foundation. Elk demography, movements and habitat selection in the Mexican wolf recovery area in Arizona. \$7,500 (PI)

2018 – 2024 Arizona Game and Fish Department. Elk demography, movements and habitat selection in the Mexican wolf recovery area in Arizona. \$999,985 (PI)

2018 – 2024 New Mexico Department of Game and Fish. Elk demography, movements and habitat selection in the Mexican wolf recovery area in New Mexico. \$1,482,167 (PI)

2018 U.S. Fish and Wildlife Service, Modeling New Mexico's Peregrine Falcon Population. \$16,800 (PI)

2015 – 2019 New Mexico Department of Game and Fish. Estimation of mountain lion density in New Mexico. \$659,335 (PI).

2015 – 2017 Department of Defense. Kirtland Air Force Base Mountain Lion Study. \$260,000 (Co-PI)

2015 – 2016 U.S. Fish and Wildlife Service. Population trajectories and extinction probabilities for populations of large ungulates. \$71,478 (PI)

2015 – 2018 U.S. Fish and Wildlife Service. Predation rates and use of habitat and wildlife drinkers by mountain lions. \$107,101 (PI)

2015 New Mexico Chapter of the Rocky Mountain Elk Foundation. Influence of large-scale forest restoration treatments on forage resources and habitat selection of elk in north-central New Mexico \$8,600 (PI)

2014 – 2018 New Mexico Department of Game and Fish (NMDGF) and New Mexico Agricultural Experiment Station (NMAES). Top-down and bottom-up influences on mule deer in central New Mexico. \$71,932 (NMDGF), \$40,000 (NMAES)(PI)

2014 – 2016 U.S. Army Construction Engineering Research Laboratory. The ecological web contributing to a sarcoptes mange epizootic in coyotes of the Mojave Desert, Fort Irwin, California. \$75,000 (Co-PI)

2014 – 2016 U.S. Army Construction Engineering Research Laboratory. An estimate of abundance and an assessment of the efficacy of sterilization techniques for the control of wild burro populations. \$168,944 (Co-PI)

2014 – 2016 U.S. Geological Survey, National Climate Change & Wildlife Science Center. Evaluating adaptive capacity of desert bighorn sheep to climate change. \$200,212 (Co-PI)

2014 – 2016 U.S. Fish and Wildlife Service. An assessment of the landscape genetic structure of the western continental golden eagle population. \$120,041.77 (Co-PI)

2014 New Mexico Chapter of the Rocky Mountain Elk Foundation. Influence of large-scale forest restoration treatments on forage resources and habitat selection of elk in north-central \$8,600 (PI)

2014 – 2016 U.S. Fish and Wildlife Service. Quantifying habitat selection and predicting habitat use by Whooping Crane. \$85,709 (PI)

2013 – 2017 Pueblo of Jemez. Resource selection and movements of mule deer and elk on the Jemez Pueblo. \$161,053 (PI)

2013 – 2015 U.S. Fish and Wildlife Service. Population trends and predicted trajectories of American Pronghorn (*Antilocapra americana*) in the American Southwest \$39,291 (PI)

- 2013 – 2016 U.S. Geological Survey, National Climate Change & Wildlife Science Center. Assessment of drought impacts on selected fish and wildlife species in the southwestern U.S. \$260,000 (Co-PI)
- 2013 New Mexico Chapter of the Rocky Mountain Elk Foundation. Influence of large-scale forest restoration treatments on forage resources and habitat selection of elk in north-central \$8,600 (PI)
- 2013 Dallas Safari Club. Responses of elk, mule deer, black bear and mountain lions to large-scale forest restoration in New Mexico. \$5,000 (PI)
- 2012 – 2015 New Mexico Department of Game and Fish. Research Cooperative Agreement. Habitat selection, survival and cause-specific mortality of translocated mule deer in southern New Mexico. \$98,614 (PI)
- 2012 – 2014 New Mexico Department of Game and Fish. Research Cooperative Agreement. Influence of livestock grazing on activity budgets, foraging efficiency, and forage resources of desert bighorn sheep. \$94,028 (PI)
- 2011 – 2015 U.S. Geological Survey, Science Support Partnerships. Population dynamics and reintroduction characteristics of Mexican wolves in Arizona and New Mexico's Blue Range Wolf Recovery Area. \$89,088 (Co-PI)
- 2013 T & E, Inc. Influence of Livestock Grazing on Desert Bighorn Sheep. \$2,500 (Co-PI)
- 2013 T & E, Inc. Cause specific mortality of neonatal desert bighorn sheep in the Peloncillo Mountains, New Mexico. \$2,500 (Co-PI)
- 2013 T & E, Inc. Use of noninvasive genetic analysis to estimate the abundance and density of black bears in New Mexico. \$2,000 (Co-PI)
- 2013 T & E, Inc. Distribution and Habitat Selection of Golden Eagles (*Aquila chrysaetos*) in Areas with High Potential for Wind Energy Development. \$2,500 (Co-PI)
- 2013 T & E, Inc. Black bear feeding on ungulate prey in a multi-predator system: Using GPS cluster analysis to locate feeding sites. \$1,875 (Co-PI).
- 2012 T & E, Inc. Microhabitat selection and survival of elk calves in the Blue Range Wolf Recovery Area. \$2,000 (Co-PI)
- 2012 Dallas Safari Club. Microhabitat selection and survival of elk calves in the Blue Range Wolf Recovery Area. \$5,000 (Co-PI)
- 2011 Arthur A. Seeligson, Jr. Conservation Fund. Research Grant. Population status and habitat selection of an inland alligator (*Alligator mississippiensis*) at the Fort Worth Nature Center and Refuge. \$3,842 (PI)
- 2011 – 2014 New Mexico Department of Game and Fish. Research Cooperative Agreement. Survival and cause-specific mortality of neonatal desert bighorn sheep in New Mexico. \$109,866 (PI)
- 2011 – 2016 New Mexico Department of Game and Fish. Research Cooperative Agreement. Estimation of black bear abundance and densities in New Mexico using noninvasive genetic analysis. \$423,672 (Co-PI)
- 2011 Dallas-Fort Worth Herpetological Society. Research Grant. Population status and habitat selection of an inland alligator (*Alligator mississippiensis*) at the Fort Worth Nature Center and Refuge. \$600 (PI)
- 2011 – 2015 Bureau of Land Management. Research Cooperative Agreement. Distribution and Habitat Selection/Space Use of Migratory and Resident Golden Eagles (*Aquila chrysaetos*) in Areas with High Potential for Wind Energy Development in New Mexico. \$292,854 (Co-PI)
- 2010 Safari Club International Foundation. Research Grant. Influence of predation risk by lions (*Panthera leo*) on habitat selection, resource use, movements, and



	conservation of formerly migratory wildebeest ( <i>Connochaetes taurinus</i> ) and resident zebra ( <i>Equus burchelli</i> ) in South Africa. \$4,876 (PI)
2010	Dallas-Fort Worth Herpetological Society. Research Grant. Population status and habitat selection of an inland alligator ( <i>Alligator mississippiensis</i> ) at the Fort Worth Nature Center and Refuge. \$500 (PI)
2009	Office of Graduate Studies and Research, Texas A&M University-Commerce, Faculty Mini-grant. Population status and habitat selection of an inland alligator ( <i>Alligator mississippiensis</i> ) at the Fort Worth Nature Center and Refuge \$600 (PI)
2009	Dallas Chapter of the Safari Club. Research Grant. Habitat selection, movements, and conservation of formerly migratory wildebeest ( <i>Connochaetes taurinus</i> ) in southern Africa. \$6,732 (PI)
2008	Office of Graduate Studies and Research, Texas A&M University-Commerce. Faculty Research Enhancement Grant. Influence of ecosystem heterogeneity and predation on habitat selection, resource use, and movements of non-migratory wildebeest. \$13,875 (PI)
2008	Faculty Development Committee, Texas A&M University-Commerce. International Studies Grant. Habitat selection, movements, and conservation of formerly migratory wildebeest ( <i>Connochaetes taurinus</i> ) in South Africa. \$1,700 (PI)
2008	Office of Graduate Studies and Research, Texas A&M University-Commerce, Faculty Mini-grant. Habitat selection, movements, and conservation of formerly migratory wildebeest ( <i>Connochaetes taurinus</i> ) in South Africa. \$600 (PI)
2006	Arizona Desert Bighorn Sheep Society, Phoenix, Arizona, Research Grant. Impact of drought on desert bighorn sheep forage. \$5,000 (Co-PI)
2006	Foundation for North American Wild Sheep, Cody Wyoming, Grant in Aid of Research. Impact of drought on desert bighorn sheep forage. \$5,000 (Co-PI)
2005	Foundation for North American Wild Sheep, Cody Wyoming, Grant in Aid of Research. Influence of man-made water sources on desert bighorn sheep. \$20,000 (Co-PI)
2004	Foundation for North American Wild Sheep Cody, Wyoming, Grant in Aid of Research. Influence of man-made water sources on desert bighorn sheep. \$5,000 (Co-PI)
2004	United States Forest Service, Coronado National Forest. Impact of the Bullock and Aspen fires on desert bighorn sheep habitat in the Pusch Ridge Wilderness Area, Arizona. \$5,000 (Co-PI)
2003	Arizona Game and Fish Department. Literature review and annotated bibliography on water requirements of desert ungulates. \$9,900 (Co-PI)
2003	Boone and Crockett Club, Missoula, Montana, Grant in Aid of Wildlife Research. Influence of man-made water sources on desert bighorn sheep. \$7,250 (Co-PI)
2003	Foundation for North American Wild Sheep, Cody, Wyoming, Grant in Aid of Research. Influence of man-made water sources on desert bighorn sheep. \$10,000 (Co-PI)
2002	Boone and Crockett Club, Missoula, Montana, Grant in Aid of Wildlife Research. Influence of man-made water sources on desert bighorn sheep. \$10,000 (Co-PI)
2002 – 2006	Arizona Agricultural Experiment Station Project Grant, University of Arizona. Manipulating water sources of desert bighorn sheep in the Cabeza Prieta National Wildlife Refuge, Arizona. \$35,000 (Co-PI).

### **Awards, Scholarships, and Fellowships**

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2024 – Wildlife Professional Award, New Mexico Chapter of The Wildlife Society

2023 – Honor Plaque, Desert Bighorn Council  
 2010 – Outstanding Scientific Publication Award – Wildlife Monograph. The Wildlife Society.  
 2010 – Outstanding Scientific Publication Award. Texas Chapter of The Wildlife Society.  
 2007 – Postdoctoral Research Fellowship. National Research Foundation, South Africa.  
 2007 – Postdoctoral Research Fellowship. School of Animal, Plant, & Environmental Sciences, University of the Witwatersrand, South Africa.  
 2006 – Postdoctoral Research Fellowship. School of Animal, Plant, & Environmental Sciences, University of the Witwatersrand, South Africa.  
 2006 – Doug Morrison Award, Arizona Chapter of The Wildlife Society  
 2005 – Rick F. Seegmiller Memorial Scholarship.  
 2005 – Hansen-Welles Memorial Scholarship, Desert Bighorn Council.  
 2004 – Arizona Desert Bighorn Sheep Society Scholarship.  
 2003 – Hansen-Welles Memorial Scholarship, Desert Bighorn Council.  
 2003 – Arizona Desert Bighorn Sheep Society Scholarship.  
 2002 – National Fish and Wildlife Foundation Budweiser Conservation Scholarship.  
 2002 – Hansen-Welles Memorial Scholarship, Desert Bighorn Council.  
 2001 – Biological Conservation Scholarship. Department of Biological Sciences, California State University, Sacramento.  
 2001 – Graduate Research Award. Biological Sciences Alumni Chapter, Department of Biological Sciences, California State University, Sacramento.  
 2000 – Biological Conservation Scholarship. Department of Biological Sciences, California State University, Sacramento.

### **Professional Affiliations**

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- American Society of Mammalogists
- Desert Bighorn Council
- The Wildlife Society
  - Certified Wildlife Biologist

### **Professional and Public Service**

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Member. Citizen Advisory Committee. New Mexico Department of Game and Fish Habitat Stamp Program (2021 – present)

### **Editorial Service**

- Editor: Krausman, P.R., and Cain, J.W. III, editors. 2022. *Wildlife Management: Contemporary Principles and Practices*, Second Edition. The Wildlife Society and Johns Hopkins University Press.
- Editor: J.W. Cain, III and J.P. Marshal, editors. 2013. *Proceedings of the IV International Wildlife Management Congress*, 2012, Durban South Africa.
- Editor: Krausman, P.R., and Cain, J.W. III, editors. 2013. *Wildlife Management: Contemporary Principles and Practices*. The Wildlife Society and Johns Hopkins University Press.
- Editor: Cain, J.W., III, and P.R. Krausman, editors. 2006. *Proceedings of the 2005 Conference of the Southwest Section of The Wildlife Society. Managing Wildlife in the Southwest: New Challenges for the 21<sup>st</sup> Century*. Southwest Section of The Wildlife Society, Tucson, Arizona, USA.
- Editor (2015 – 2023): *Desert Bighorn Council Transactions*
- Subject Matter Editor (2016 – 2022): *Ecosphere*
- Associate Editor (2015 – 2022): *Journal of Wildlife Management*

- Associate Editor (2014 – 2015): *The Wildlife Society Bulletin*
- Subject Editor (2012 – 2014): *Journal of Fish and Wildlife Management*
- Associate Editor (2005): Special Section of *The Wildlife Society Bulletin*
- Technical editor (2004 – 2007): *Wildlife Monographs*

### **Reviewer**

- *African Journal of Ecology*
- *Animal Behaviour*
- *Canadian Field Naturalist*
- *Canadian Journal of Animal Science*
- *Desert Bighorn Council Transactions*
- *Ecosphere*
- *European Journal of Wildlife Research*
- *International Journal of Biodiversity and Conservation*
- *Journal of Applied Ecology*
- *Journal of Arid Environments*
- *Journal of Mammalogy*
- *Journal of Tropical Ecology*
- *Journal of Wildlife Management*
- *Southwestern Naturalist*
- *Studies in Avian Biology*
- *Western North American Naturalist*
- *Wildlife Society Bulletin*
- *Wilson Bulletin*

### **Professional Organization and Conference Service**

- Tech Staff (2019 – present), Desert Bighorn Council
- Project Advisory Committee (2011 – present). New Mexico Chapter of the Rocky Mountain Elk Foundation
- Conference Program Committee (2025), Annual Meeting of the Arizona/New Mexico Chapter of The Wildlife Society, Albuquerque, New Mexico, USA.
- Session chair. (2022). Annual Meeting of the American Society of Mammalogists. Tucson, Arizona.
- President-elect (2020), President (2021), Past President (2022). Southwest Section of The Wildlife Society.
- The Wildlife Society, Albuquerque National Conference, Fundraising Committee Member (January 2016 - September 2017)
- Subcommittee Chair (2014 – 2015). Contributed Papers Subcommittee. 5<sup>th</sup> International Wildlife Management Congress, Sapporo, Japan.
- Committee Chair. (2014). Conference Planning Committee. 2015 Annual Meeting of the Arizona/New Mexico Chapter of The Wildlife Society, Las Cruces, New Mexico, USA
- President-elect (2013), President (2014), Past President (2015). New Mexico Chapter of The Wildlife Society.
- Session chair. (2013). Annual Meeting of the Arizona/New Mexico Chapter of The Wildlife Society, Albuquerque, New Mexico, USA.
- Subcommittee Chair (2011 – 2012). Contributed Papers Subcommittee. 4<sup>th</sup> International Wildlife Management Congress, Durban, South Africa.
- Committee Chair (2010). Conservation Affairs Committee, Texas Chapter of The Wildlife Society.

- Faculty Advisor (2008 – 2010). Student Chapter of The Wildlife Society, Texas A&M University-Commerce
- Board Member (2004 – 2005). Corresponding Secretary, Arizona Chapter of The Wildlife Society.
- Committee Member. (2005). Conference Planning Committee. 2006. Annual Meeting of the Arizona/New Mexico Chapter of The Wildlife Society, Flagstaff, Arizona, USA
- Committee Member (2005). Conference Planning and Program Committees. Conference of the Southwest Section of The Wildlife Society: Managing Wildlife in the Southwest: New Challenges for the 21<sup>st</sup> Century, Alpine, Texas, USA.
- Committee chair. (2005). Proceedings Committee. Conference of the Southwest Section of The Wildlife Society: Managing Wildlife in the Southwest: New Challenges for the 21<sup>st</sup> Century, Alpine, Texas, USA
- Session chair. (2006). Annual Meeting of the Arizona/New Mexico Chapter of The Wildlife Society, Flagstaff, Arizona, USA.
- Session chair. (2004). Annual Meeting of the Arizona/New Mexico Chapter of The Wildlife Society, Safford, Arizona, USA.
- Session chair. (2003). Third International Wildlife Management Congress, Christchurch, New Zealand.