16 January 2009

CIRRICULUM VITAE

A. Personal Data

1. Name: John G. Kie

Research Professor
Department of Biological Sciences
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Professional interests: Ecology and management of mule deer, elk, moose, and other large mammals; landscape ecology; effects of landscape structure on the movements and distributions of animals.

Personal interests: Hunting upland game birds with my Labrador retrievers; SCUBA diving; sailing.

2. Educational Background:

a. University degrees:

Ph.D.; University of California, Berkeley; 1977; Wildland Resource Science.
M.S.; University of California, Berkeley; 1973; Wildland Resource Science.
B.S. with honors; University of California, Berkeley; 1972; Forestry and Conservation.

b. Additional academic study:

A New Logistic Regression Approach for Estimating a Resource Selection Probability Functions; Dr. Bryan Manly (West Inc., Laramie, Wyoming); 2 hours, web-based seminar; April 2007.

Resource Selection Functions and Patch Occupancy Models: Similarities and Differences; Dr. Lyman McDonald (West Inc., Laramie, Wyoming); 2 hours, web-based seminar; March 2007.

Metapopulations of Animals and Plants: Inventory, Monitoring, and Viability Analysis; Dr. Edward O. Garton (University of Idaho); 32 hours; University of Idaho, Moscow, Idaho; January 2000.

Spatial Statistical Modeling of Ecosystem Resources and the Environment; Dr. Robin Reich (Colorado State University); 32 hours; Colorado State University, Fort Collins, Colorado; August 1999.

Ecological Modeling; Dr. Tony Starfield (University of Minnesota); 32 hours; U.S. Forest Service, Fort Collins, Colorado; April 1997.

FRAGSTATS - Habitat Fragmentation Statistics; Dr. Kevin McGarigal (University of Massachusetts); 32 hours; U.S. Forest Service, Fort Collins, Colorado; May 1996.

The NAVSTAR Global Positioning System; Thomas Logsdon, (Rockwell Company); 32 hours; University of California Berkeley Extension, Continuing Education in Engineering, Burlingame, California; November 1993.

Resource Selection Statistics; Dr. Lyman McDonald (University of Wyoming), Dr. Bryan Manly (University of Otago, New Zealand), and Dr. Dana Thomas (University of Alaska Fairbanks); 32 hours; University of Wyoming, Laramie, Wyoming; January 1991.

3. Date of Last Promotion – 2 November 2003

4. Professional Experience:

2005 to present, *Research Professor;* Department of Biological Sciences, Idaho State University, Pocatello, Idaho.

2007 to present, *Interim Director;* Center for Ecological Research and Education (CERE), Idaho State University, Pocatello, Idaho.

2001 to present, *Affiliate Professor of Wildlife Biology;* Department of Fish and Wildlife Resources, University of Idaho, Moscow, Idaho.

1989 to present, *Affiliate Professor of Biology and Wildlife and Senior Research Scientist*; Department of Biology and Wildlife, and Institute of Arctic Biology, University of Alaska Fairbanks, Fairbanks, Alaska.

2003-2005, *GS-15 Chief Research Wildlife Biologist;* U.S. Forest Service, Pacific Northwest Research Station, La Grande, Oregon

1996-2003; *GS-14 Research Wildlife Biologist;* U.S. Forest Service, Pacific Northwest Research Station, La Grande, Oregon (*Team Leader*, Starkey Ungulate Ecology Project, 1996-1999).

1995-2001, *Associate Staff Specialist*; U.S. Forest Service, San Dimas Technology and Development Center, San Dimas, California.

1990-1996; *GS-14 Research Wildlife Biologist*; U.S. Forest Service, Pacific Southwest Research Station, Fresno, California.

1981-1990; *GS-13 Research Wildlife Biologist*; U.S. Forest Service, Pacific Southwest Forest and Range Experiment Station, Fresno, California (*Project Leader,* Range Research Project, 1981-1987).

1980-1981; *GS-12 Research Wildlife Biologist*; U.S. Forest Service, Pacific Southwest Forest and Range Experiment Station, Fresno, California.

1979-1980; *Assistant Research Range Ecologist*; Department of Agronomy and Range Science, University of California, Davis, California; and *Project Leader*, on contract to U.S. Forest Service, Shasta-Trinity National Forest, Redding, California.

1978-1979; *Lecturer and Associate Specialist*; Department of Forestry and Resource Management, University of California, Berkeley, California.

1977-1978; *Visiting Assistant Professor*; Department of Zoology, Arizona State University, Tempe, Arizona.

1976; *Teaching Associate*; University of California's Forestry Summer Camp, Meadow Valley, California.

1974-1975; *Teaching Associate*; Department of Forestry and Resource Management, University of California, Berkeley, California.

1972-1977; *Welder Wildlife Foundation Doctoral Research Fellowship*; University of California, Berkeley, California.

1971; *Research Assistant*; University of California's Sagehen Creek Wildlife-Fisheries Field Research Station, Truckee, California.

B. Professional Activities and Recognition

1. Honors and Awards:

Elected Fellow, The Wildlife Society, May 2005.

Arthur S. Einarsen Professional of the Year Award, Northwest Section of The Wildlife Society; 2004; for outstanding service to the wildlife profession and dedication to wildlife resources.

Publication of the Year Award (Best Journal Article), The Wildlife Society, 2003 (see publication 74).

Olof C. Wallmo Award, presented by the Western Association of Fish and Wildlife Agencies at the 4th Biennial Western States and Provinces Deer and Elk Workshop in Wilsonville, Oregon, 1-3 August 2001; in recognition of outstanding contributions to knowledge and improved management of mule and black-tailed deer.

Raymond F. Dasmann Professional of the Year Award, Western Section of The Wildlife Society; 1994; for continuing contributions to the field of wildlife research and management.

Publication of the Year Award, USDA APHIS, Denver Wildlife Research Center; 1987 (see publication 19).

Wildlife Biologist of the Year, Shasta-Cascade Chapter of The Wildlife Society; 1980; for research on black-tailed deer and their habitat in Trinity County, California.

Award from the College of Natural Resources, University of California, Berkeley; 1977; to participate in NATO Scientific Affairs Division Statistical Ecology Workshop.

Welder Wildlife Foundation Doctoral Research Fellowship; 1972-1977; to study the effects of predation on Texas white-tailed deer.

Member, Xi Sigma Pi (National Honorary Forestry Fraternity, since 1972; Vice-President Theta Chapter, 1973-1974).

2. Society and Professional Activities

a. Membership in professional societies

American Association for the Advancement of Science, since 1997.

Sigma Xi (The Scientific Research Society); since 1977.

American Society of Mammalogists; since 1973.

The Wildlife Society; since 1971.

b. Service in professional societies:

Wildlife Publication Award Committee; The Wildlife Society; 2008-present.

Liaison to International Union for Conservation of Nature and Natural Resources (IUCN), American Society of Mammalogists, 2003-present.

Resolutions Committee, American Society of Mammalogists, 2002-present.

Publications Committee (Associate Editor), American Society of Mammalogists, 2000-2003.

Nominations Committee, The Wildlife Society; 2000-2001.

Sigma Xi (The Scientific Research Society), President, Eastern Oregon University Chapter, 1998-1999.

Member, International Union for Conservation of Nature and Natural Resources (IUCN), Deer Specialist Group and Species Survival Commission, 1997-present.

North American Wildlife and Natural Resources Conference, Technical Session Committee; The Wildlife Society; 1997-98.

Conservation of Land Mammals Committee; American Society of Mammalogists; 1992-1998.

Candidate for Vice-President, The Wildlife Society, 1995.

Wildlife Research Technical Review Committee; The Wildlife Society; 1992-1996 (see publication 49).

Panel on the Future Directions for Range Research; Society for Range Management; February 1993 (see invited presentation 8 and publication 41).

Aldo Leopold Medal Award Committee; The Wildlife Society; 1992-1993.

Western Section Representative to Council; The Wildlife Society; 1989-1992.

President; Western Section of The Wildlife Society; 1988.

Special Publications Identification Committee; The Wildlife Society; 1988-989.

Chair, Publications Committee; The Wildlife Society; 1988-1989.

Wildlife Publication Award Committee; The Wildlife Society; 1982-1984.

Conservation Education Award Committee; The Wildlife Society; 1984-1985.

Faculty Advisor, Arizona State University Student Chapter, The Wildlife Society, 1977-1978.

c. Professional registration:

Certified Wildlife Biologist; since 1980; The Wildlife Society.

Associate Wildlife Biologist; 1979-1980; The Wildlife Society.

3. University Involvement

a. Current Involvement

I am currently serving as a Research Professor in the Department of Biological Sciences at Idaho Sate University on a long-term intergovernmental personnel assignment (IPA).

Since 1989 I have held an Adjunct Faculty Appointment in the Department of Biology and Wildlife at the University of Alaska, Fairbanks. I served as a Ph.D. committee member for Matthew Nicholson (Habitat Selection by Mule Deer: Effects of Migration and Population Density), from 1989-1994, and Co-Chair of the Ph.D. committee for Kelley Stewart (Spatial and Temporal Variations in Ungulate Herbivory Effects on Ecosystem Processes and Disturbance Regimes), from 1997-2004.

I am an Affiliate Professor of Wildlife Biology, Department of Fish and Wildlife Resources, University of Idaho, Moscow, Idaho. I have served on the Ph.D. Committee of Jon Horne who developed new approaches to estimating home range size, habitat selection, and space use of wildlife, and on the M.S. Committee of Ryan Long, who examined the effects of forest fuels reduction treatments on elk and mule deer in northeastern Oregon.

b. Current and past students

Under construction

c. Past Involvement

I was an Assistant Research Range Ecologist in the Department of Agronomy and Range Science; University of California, Davis, during 1978-1980. This was a post-doctoral research assignment serving as Project Leader on contract to U.S. Forest Service, Shasta-Trinity National Forest. The project evaluated the success of habitat improvement programs for black-tailed deer in Trinity County to mitigate past habitat losses resulting from reservoir construction. The project was a cooperative, administrative study agreement between the U.S. Forest Service and the University of California at Davis.

I was a Lecturer and Associate Specialist in the Department of Forestry and Resource Management, University of California, Berkeley, during 1978-79. I taught senior-level Forestry 177, Case Histories in Wildlife Management, Forestry 270, graduate-level Forest-Wildlife Interactions, and Forestry 298, graduate-level Analysis of Wildlife Populations.

I was a Visiting Assistant Professor in the Zoology Department at Arizona State University, Tempe, during 1977-78. I taught Zoology 411 and 412, senior-level Wildlife Management, and Biology 100, General Biology for Non-Majors. I also served as a Masters thesis committee member for John Morgart (Feral Burros on Bandelier National Monument), and Ph.D. oral examining committee member for Richard Golightly in the Ecology Program.

4. Presentations

a. Invited Professional Society, University, and Research Institute Presentations

59. **Kie, John G.**, and Alan A. Ager. 2008. A rule-based method for selecting a bandwidth in kernel home-range analyses. Invited presentation at an international conference and workshop – GPS Telemetry Data: Challenges and opportunities for behavioural ecology studies, held 7-12 September 2008 at Centre for Alpine Ecology - Fondazione Edmund Mach, Trento, Italy.

58. **Kie, John G.**, Ryan Long, and R Terry Bowyer. 2008. Using animal movement patterns to reveal life history events: parturition in mule deer. Annual meeting of the U.S. Chapter of the International Association for Landscape Ecology, Madison, Wisconsin, 6-10 April 2008.

57. **Kie, John G.,** and R. Terry Bowyer. 2007. The role of thermal landscapes in resource selection by black-tailed deer. International Association for Landscape Ecology World Congress, Wageningen, Netherlands, 8-12 July 2007.

56. Bowyer, R. Terry, **John G. Kie,** David K. Person and John W. Connelly. 2007. Wildlife management and landscape ecology: integrating concepts and practice. Annual meeting U.S. Chapter, International Association for Landscape Ecology, Tucson, Arizona, 9-13 April 2007.

55. **Kie , John G.** 2006. The Starkey Ungulate Ecology Project: interactions among elk, mule deer, and cattle in managed forests. Presentation at Idaho Museum of Natural History, Pocatello, Idaho, 14 September 2006.

54. **Kie , John G.** 2006. The Starkey Ungulate Ecology Project: interactions among elk, mule deer, and cattle in managed forests. Presentation to Idaho Fish and Game Biologists, Pocatello, Idaho, 10 March 2006.

53. **Kie, John G**., and Alan A. Ager. 2005. On the importance of choosing an appropriate bandwidth in kernel home-range analyses. Annual meeting of The Wildlife Society, Madison, Wisconsin, 25-29 September 2005.

52. Rodgers, Arthur A., Bradley A. Allison, and **John G. Kie**. 2005. Comparison of kernel home range estimates computed by commonly used software programs. Annual meeting of The Wildlife Society, Madison, Wisconsin, 25-29 September 2005.

51. **Kie, John G.** 2005. The Starkey Ungulate Ecology Project: interactions among elk, mule deer, and cattle in managed forests. University of Alberta, Edmonton, Canada, 9 September 2005.

50. Bowyer, R. Terry, and **John G. Kie**. 2005. Effects of scale on interpreting life-history characteristics of large mammals. International Mammalogical Congress IX, Sapporo, Hokkaido, Japan, 31 July-5 August 2005.

49. **Kie, John G.**, Alan A. Ager, Norman J. Cimon, Bruce K. Johnson, Priscilla K. Coe, Mary M. Roland, Michael J. Wisdom, and Martin Vavra. 2004. The Starkey database: spatial-environmental relations of North American elk, mule deer, and cattle at the Starkey Experimental Forest and Range in northeastern Oregon. North American Wildlife and Natural Resources Conference, Spokane, Washington, 16-20 March 2004.

48. Vavra, Martin, Michael J. Wisdom, **John G. Kie**, John G. Cook, and Robert A. Riggs. 2004. The Role of ungulate herbivory and management on ecosystem pattern and processes: future direction for the Starkey project. North American Wildlife and Natural Resources Conference, Spokane, Washington, 16-20 March 2004.

47. Alan A. Ager, Haiganoush K. Preisler, Bruce K. Johnson, and **John G. Kie**. 2004. Elk and deer movement pattern in relation to habitat use. North American Wildlife and Natural Resources Conference, Spokane, Washington, 16-20 March 2004.

46. Priscilla K. Coe, Bruce K. Johnson, Kelley M. Stewart, and **John G. Kie**. 2004. Spatial and temporal interactions of elk, mule deer, and cattle. North American Wildlife and Natural Resources Conference, Spokane, Washington, 16-20 March 2004.

45. Noyes, James H., Bruce K. Johnson, Brian L. Dick, and **John G. Kie**. 2004. Effects of male age and female nutritional condition on elk reproduction. North American Wildlife and Natural Resources Conference, Spokane, Washington, 16-20 March 2004.

44. Findholt, Scott L., Daalkhaijav Damiran, Bruce K. Johnson, Tim DelCurto, and **John G. Kie**. 2004. Diet overlap among elk, mule deer, and cattle. North American Wildlife and Natural Resources Conference, Spokane, Washington, 16-20 March 2004.

43. **Kie, John G.** 2004. Ecology and management of large mammals. Classroom presentation, Department of Fish and Wildlife Resources, University of Idaho, 10 March 2004.

42. **Kie, John G.,** Alan A. Ager, Haiganoush K. Preisler, and R. Terry Bowyer. 2003. Movements of Rocky Mountain elk (*Cervus elaphus*): effects of landscape structure. International Association for Landscape Ecology World Congress, Darwin, Northern Territory, Australia, 13-17 July 2003.

41. **Kie, John G.** 2003. Wildlife Radio Telemetry: Past, Present, and Future. Center for Nanosensor Technology, University of Alaska Fairbanks, 10 April 2003.

40. Stewart, Kelley M., R. Terry Bowyer, **John G. Kie,** Brian L. Dick, and Merav Ben-David. 2003. Niche relationships among 3 large herbivores: resource partitioning and competitive displacement. Annual meeting of the American Association for the Advancement of Science, Denver, Colorado, 13-18 February 2003 (student award presentation, see invited presentation 33).

39. Bowyer, R. Terry, **John G. Kie,** Vernon C. Bleich, and Perry S. Barboza. 2003. Sexual segregation among ungulates: a niche-based framework for resolving controversy. Annual Meeting of the Northwest Section of The Wildlife Society, Eugene, Oregon, 10-14 February 2003.

38. **Kie, John G.**, and R. Terry Bowyer. 2003. Habitat selection by mule deer: does spatial scale matter? Annual Meeting of the Northwest Section of The Wildlife Society, Eugene, Oregon, 10-14 February 2003.

37. **Kie, John G.** 2002. Habitat selection by mule deer at the landscape level. Departmental Seminar, Wildlife and Conservation Biology Series, Department of Ecosystem Science, Policy, and Management, University of California, Berkeley, 8 November 2002.

36. Stewart, Kelley M., R. Terry Bowyer, **John G. Kie**, B. L. Dick, and Merav Ben-David. 2002. Niche relationships among three large herbivores: resource partitioning and competitive displacement. 53rd Arctic Science Conference, American Association for the Advancement of Science Arctic Division, Fairbanks, Alaska, 18-21 September 2002 (winner of student award, see invited presentation 38).

35. Bowyer, R. Terry, Victor Van Ballenberghe, and **John G. Kie.** 2002. Female incitation of male aggression via vocalizations: evidence of female choice in Alaskan moose. 53rd Arctic Science Conference, American Association for the Advancement of Science Arctic Division, Fairbanks, Alaska, 18-21 September 2002.

34. **Kie, John G.,** and R. Terry Bowyer. 2002. Habitat selection by mule deer: does spatial scale matter? 53rd Arctic Science Conference, American Association for the Advancement of Science Arctic Division, Fairbanks, Alaska, 18-21 September 2002.

33. Brillinger, David. R., Preisler, Haiganoush, K., Ager, Alan A., and **John G. Kie**. 2002. An Exploratory Data Analysis (EDA) of the paths of moving animals. Workshop in Honour of David F. Andrews, The Fields Institute for Research in Mathematical Sciences, Toronto, Canada, 23-24 May 2002.

32. **Kie, John G.,** and R. Terry Bowyer. 2001. Sexual segregation in large mammals: the importance of a spatial definition. Sexual segregation in mammalian herbivores, a special symposium held in conjunction with the 8th International Theriological Congress, Sun City, South Africa, 12-17 August 2001.

31. Bowyer, R. Terry, and **John G. Kie.** 2001. Effects of foraging efficiency on sexual segregation in mule deer. Sexual segregation in mammalian herbivores, a special symposium held in conjunction with the 8th International Theriological Congress, Sun City, South Africa, 12-17 August 2001.

30. Ager, Alan A., Bruce K. Johnson, **John G. Kie**, and John W. Kern. 2001. Fine scale movements and habitat use by elk and mule deer in northeastern Oregon. Annual Meeting of the Oregon Chapter of the Wildlife Society, Portland, Oregon, 14-16 February 2001.

29. **Kie, John G**. 2000. Landscape heterogeneity at differing scales: effects on spatial distribution of mule deer. Departmental seminar, Department of Wildlife and Fisheries Science, South Dakota State University, Brookings, 4 November 2000.

28. **Kie, John G.**, R. Terry Bowyer, and Kelley M. Stewart. 2000. Ungulates in western forests: habitat requirements, population dynamics, niche relations, and ecosystem processes. Annual meeting of The Wildlife Society, Nashville, Tennessee, 12-16 September 2000.

27. **Kie, John G.** 2000. Sexual segregation in white-tailed deer: density dependent changes in use of space, habitat selection, and dietary niche. Departmental seminar, Department of Zoology and Cooperative Wildlife Research Laboratory, Southern Illinois University, Carbondale, 25 February 2000.

26. **Kie, John G.** 2000. Optimal foraging in a risky environment: life-history strategies for ungulates. Departmental seminar, Department of Zoology and Cooperative Wildlife Research Laboratory, Southern Illinois University, Carbondale, 24 February 2000.

25. **Kie, John G.** 1998. Home-range size in mule deer: correlates of landscape metrics and effects of scale. Summer Seminars at Brathens, Institute of Terrestrial Ecology, Banchory, Scotland, 5 August 1998

24. Riggs, Robert A., John G. Cook, and **John G. Kie**. 1998. The role of large ruminant herbivores in management and restoration of disturbance-adapted forest ecosystems. Euro-American Mammal Congress, Santiago de Compostela, Spain, 19-24 July 1998.

23. Bowyer, R. Terry, Vic Van Ballenberghe, and **John G. Kie**. 1998. Large herbivores as keystone species: the role of the Alaskan moose in landscape processes. Euro-American Mammal Congress, Santiago de Compostela, Spain, 19-24 July 1998.

22. **Kie, John G.** 1998. Optimal foraging in ungulates: an evolutionary perspective. Annual Meeting of the American Society of Mammalogists, Blacksburg, Virginia, 6-10 June 1998.

21. Bowyer, R. Terry, Victor Van Ballenberghe, **John G. Kie,** and Julie A. K. Maier. 1998. Birth-site selection by Alaskan moose: maternal strategies for coping with a risky environment. Annual Meeting of the American Society of Mammalogists, Blacksburg, Virginia, 6-10 June 1998.

20. **Kie, John G.** 1998. Landscape correlates to home range size in mule deer. Eastern Oregon University Science Colloquium, La Grande, Oregon, 12 March 1998.

19. Johnson, Bruce K., Michael J. Wisdom, John G. Cook, and **John G. Kie**. 1998. Elk and managed forests: what science tells us. Rocky Mountain Elk Foundation 14th Annual Meeting and Professional Biologists Workshop, Portland, Oregon, 18 February 1998.

18. **Kie, John G.,** and R. Terry Bowyer. 1997. Sexual segregation in white-tailed deer: density ependent changes in use of space, habitat selection, and dietary niche. Annual meeting of The Wildlife Society, Snowmass, Colorado, 23-26 September 1997.

17. Bowyer, R. Terry, Vernon C. Bleich, and **John G. Kie**. 1997. Sexual segregation in ruminants: evolution, definitions, and competing hypotheses. Annual meeting of The Wildlife Society, Snowmass, Colorado, 23-26 September 1997.

16. **Kie, John G.** 1996. Recent advances in analysis of animal home range data: is your kernel adaptive? Departmental seminar, Department of Biology and Wildlife, University of Alaska Fairbanks, 23 September 1996.

15. **Kie, John G.** 1996. Recent advances in analysis of animal home range data. Departmental seminar, Program in Ecology, Evolution, and Conservation Biology, University of Nevada, Reno, 30 January 1996.

14. **Kie, John G.** 1995. Animal movements in a heterogeneous environment: landscape correlates to home range size in black-tailed deer. Departmental seminar, Department of Natural Resources Science, University of Rhode Island, Kingston, 26 June 1995.

13. **Kie, John G.** 1995. Recent advances in ground and space-borne techniques for tracking large animals. Fourth Annual Natural Resources GIS/GPS Training, Conference, and Exhibition, Columbia, California, 5-7 June 1995.

12. **Kie, John G.** 1994. Ecosystem management and the role of wildlife research. Annual meeting of the Western Section of The Wildlife Society, Maui, Hawaii, 26-29 January 1994.

11. **Kie, John G.**, R. Terry Bowyer, and Victor Van Ballenberghe. 1993. Neonatal habitat selection in subarctic and temperate ungulates: synthesizing the roles of predation risk, forage, and climate. PSW Station Scientists Meeting, Asilomar State Beach and Conference Center, Pacific Grove, California, 1-2 April 1993.

10. **Kie, John G.** 1993. GPS: the Navstar Global Positioning System. Workshop on GIS/GPS Applications in Wildlife Biology and Management, Annual Meeting of the Western Section of The Wildlife Society, Monterey, California, 23-27 February 1993.

9. **Kie, John G.**, James A. Baldwin, and Charles J. Evans 1993. CALHOME: a microcomputer program for home range analysis. Workshop on Wildlife Software, Annual Meeting of the Western Section of The Wildlife Society, Monterey, California, 23-27 February 1993.

8. **Kie, John G.** 1993. Range-wildlife research: a new agenda for a changing society. Range Research Into The 21st Century: A Symposium, Annual meeting of the Society for Range Management, Albuquerque, New Mexico, 14-19 February 1993.

7. **Kie, John G.**, and Eric R. Loft. 1991. Scientific solutions to livestock-big game conflicts: you want it when? Livestock-Big Game: Seeking Common Ground on Western Rangelands, Sparks, Nevada, 18-20 September 1991.

6. **Kie, John G.**, and Richard A. Mackie. 1991. Conservation affairs of The Wildlife Society. Annual meeting of the Western Section of The Wildlife Society, Sacramento, California, 7-9 February 1991.

5. **Kie, John G.** 1989. Optimal foraging in mule deer. Departmental seminar, Department of Biology and Wildlife, University of Alaska Fairbanks, 7 April 1989.

4. Verner, Jared, and **John G. Kie**. 1988. Population monitoring: an essential link between theoretical and applied conservation biology. Annual meeting of the Western Section of The Wildlife Society, Hilo, Hawaii, 10-13 February 1988.

3. **Kie, John G.** 1987. Evaluating habitat improvements: how do we know we've benefited deer? Western States and Provinces Deer Workshop, Pingree Park, Colorado, 4-7 August 1987.

2. **Kie, John G.** 1987. Measures of wild ungulate performance. Annual meeting of the Society for Range Management, Boise, Idaho, 8-13 February 1986.

1. **Kie, John G.** 1981. Black-tailed deer habitat improvement programs in Trinity County. Annual meeting of the Shasta-Cascade Chapter of The Wildlife Society, Weed, California, 15 May 1981.

b. Offered Papers and Posters

137. **Kie, John G.,** Ryan A. Long, and R. Terry Bowyer. 2008. Parturition, movements, and resource selection in mule deer. Annual meeting of the American Society of Mammalogists, Brookings, South Dakota, 21-25 June 2008.

136. Ryan A. Long, Janet L. Rachlow, **John G. Kie,** and R. Terry Bowyer. 2008. Sex-specific responses of North American elk to fuels reduction. Annual meeting of the American Society of Mammalogists, Brookings, South Dakota, 21-25 June 2008.

135. Long, Ryan A., Janet L. Rachlow, **John G. Kie,** and R. Terry Bowyer. 2008. Sex-specific responses of North American elk to fuels reduction. Annual meeting of the Idaho Chapter of The Wildlife Society, Boise, Idaho, 4–6 March 2008

134. Stewart, Kelley M., R. Terry Bowyer, and **John G. Kie.** 2007. Plant responses to herbivory: effects on biodiversity. Annual Meeting of The Wildlife Society, Tucson, Arizona, September 22-26, 2007.

133. Rodgers, Arthur R., Angus P. Carr, Hawthorne L. Beyer, Lled Smith, and **John G. Kie.** 2007. HRT: Home range tools for ArcGIS®. Annual Meeting of The Wildlife Society, Tucson, Arizona, 22-26 September 2007.

132. Long, Ryan A., Janet L. Rachlow, and **John G. Kie.** 2007. Seasonal response of elk and mule deer to forest fuels reduction. Annual Meeting of The Wildlife Society, Tucson, Arizona, 22-26 September 2007.

131. Long, Ryan A., Janet L. Rachlow, and **John G. Kie.** 2007. Seasonal response of two sympatric cervids to habitat alteration: elk and mule deer in managed forests. Annual meeting of the American Society of Mammalogists, Albuquerque, New Mexico, 6-10 June 2007.

130. Bowyer, R. Terry, **John G. Kie,** David K. Person and John W. Connelly. 2007. Wildlife management and landscape ecology: integrating concepts and practice. Annual meeting U.S. Chapter, International Association for Landscape Ecology, Tucson, Arizona, 9-13 April 2007.

129. Stewart, Kelley M., R. Terry Bowyer, and **John G. Kie.** 2007. Herbivore optimization by North American elk: consequences for theory and management. Annual meeting, Idaho Chapter of The Wildlife Society, Pocatello, Idaho, 5-7 March 2007.

128. Long, Ryan A., Janet L. Rachlow, and **John G. Kie.** 2007. Seasonal response of elk to forest fuels reduction. Annual meeting, Idaho Chapter of The Wildlife Society, Pocatello, Idaho, 5-7 March 2007.

127. **Kie, John G.,** and R. Terry Bowyer. 2007. Using thermal landscapes to improve resource selection functions for black-tailed deer. Annual meeting, Idaho Chapter of The Wildlife Society, Pocatello, Idaho, 5-7 March 2007.

126. Long, Ryan A., Janet L. Rachlow, and **John G. Kie**. 2006. Spatiotemporal response of elk to forest fuels reduction. Annual meeting of the Wildlife Society, Anchorage, Alaska, 23-27 September 2006.

125. Long, Ryan A., Janet L. Rachlow, and **John G. Kie**. 2006. Spatiotemporal response of elk to forest fuels reduction. Annual meeting of the American Society of Mammalogists, Amherst, Massachusetts, 17-21 June 2006.

124. Long, Ryan A, Jonathan D. Muir, Janet L. Rachlow, and **John G. Kie**. 2006. Evaluating wildlife-habitat relationships: a comparison of two model-building approaches. Annual meeting, Northwest Section of The Wildlife Society, Boise, Idaho, 7-8 March 2006.

123. Stewart, Kelley M., R. Terry Bowyer, Brian L. Dick, Bruce K. Johnson, and **John G. Kie.** 2006. Density-dependent effects on physical condition and reproduction in North American elk: an experimental test. Annual meeting, Northwest Section of The Wildlife Society, Boise, Idaho, 7-8 March 2006.

122. Long, Ryan A, Janet L. Rachlow, and **John G. Kie**. 2005. Evaluating wildlife-habitat relationships: a comparison of two model-building approaches. Annual meeting of The Wildlife Society, Madison, Wisconsin, 25-29 September 2005.

121. Bowyer, R. Terry, Vernon C. Bleich, **John G. Kie**, and Perry S. Barboza. 2005. Evolutionary models for sexual segregation among ruminants: competition or polygyny? Annual Meeting of the American Society of Mammalogists, Springfield, Missouri, 15-19 June 2005.

122. Long, Ryan A., Janet L. Rachlow, and **John G. Kie**. 2005. Modeling wildlife-habitat relationships: an evaluation of daily patterns of resource selection using a new technique. Annual Meeting of the American Society of Mammalogists, Springfield, Missouri, 15-19 June 2005.

120. **Kie, John G.**, Alan A. Ager, and R. Terry Bowyer. 2004. Effects of topography on movements of North American elk. Annual Meeting of The Wildlife Society, Calgary, Alberta, 18-22 September 2004.

119. Bowyer, R. Terry, and **John G. Kie**. 2004. Effects of scale on interpreting life-history characteristics of large mammals. Annual Meeting of The Wildlife Society, Calgary, Alberta, 18-22 September 2004.

118. **Kie, John G.**, Alan A. Ager, and R. Terry Bowyer. 2004. Effects of topography on movements of North American elk. Annual Meeting of the American Society of Mammalogists, Arcata, California, 12-16 June 2004.

117. **Kie, John G.**, Alan A. Ager, and R. Terry Bowyer. 2004. Effects of topography on movements of North American elk. Annual Meeting of the Northwest Section of The Wildlife Society, Girdwood, Alaska, 1-3 May 2004.

116. Stewart, Kelley M., R. Terry Bowyer, Brian L. Dick, and **John G. Kie.** 2003. Life-history strategies of elk: density dependent effects on condition and reproduction. 54rd Arctic Science Conference, American Association for the Advancement of Science Arctic Division, Fairbanks, Alaska, 22-24 September 2003.

115. Stewart, Kelley M., R. Terry Bowyer, Brian L. Dick, and **John G. Kie.** 2003. Life-history strategies of elk: density dependent effects on condition and reproduction. Annual Meeting of The Wildlife Society, Burlington, Vermont, 6-10 September 2003.

114. Bowyer, R. Terry, Bjorn K. Flora1, Bradley Wendling, Daniel B. Young, Deborah D. Webb, Todd F. Nichols, **John G. Kie,** and Matthew C. Nicholson. 2003. Landscape heterogeneity, habitat selection, and home ranges of female mule deer: effects of scale. Annual Meeting of the American Society of Mammalogists, Lubbock, Texas, 21-25 June 2003.

113. Bowyer, R. Terry, **John G. Kie,** Vernon C. Bleich, and Perry S. Barboza. 2003. Sexual segregation among ungulates: a niche-based framework for resolving controversy. Annual Meeting of the Alaska Chapter of The Wildlife Society, Juneau, Alaska, 9-10 April 2003.

112. Bowyer, R. Terry, Bjorn K. Flora1, Bradley Wendling, Daniel B. Young, Deborah D. Webb, Todd F. Nichols, **John G. Kie,** and Matthew C. Nicholson. 2003. Landscape heterogeneity, habitat selection, and home ranges of female mule deer: effects of scale. Annual Meeting of the Alaska Chapter of The Wildlife Society, Juneau, Alaska, 9-10 April 2003.

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109. Bowyer, R. Terry, Victor Van Ballenberghe, and **John G. Kie.** 2002. Female incitation of male aggression via vocalizations: evidence of female choice in Alaskan moose. Annual Meeting of The Wildlife Society, Bismarck, North Dakota, 24-28 September 2002.

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106**. Kie, John G.,** Alan A. Ager, and John W. Kern. 2002. Using kernel analyses to assess size of home ranges: fixed versus adaptive approaches. Annual Meeting of the American Society of Mammalogists, Lake Charles, Louisiana, 15-19 June 2002.

105. Bowyer, R. Terry, Victor Van Ballenberghe, and **John G. Kie.** 2002. Female incitation of male aggression via vocalizations: evidence of female choice in Alaskan moose. Annual Meeting of the Northwest Section of The Wildlife Society, Spokane, Washington, 17-19 April 2002.

104. **Kie, John G.,** Alan A. Ager, and John W. Kern. 2002. Using kernel analyses to assess size of home ranges: fixed versus adaptive approaches. Annual Meeting of the Northwest Section of The Wildlife Society, Spokane, Washington, 17-19 April 2002.

103. Vavra, Martin, Robert A. Riggs, Michael J. Wisdom, Alan A. Ager, Miles G. Hemstrom, Bruce K. Johnson, John G. Cook, **John G. Kie**, and Timothy DelCurto. 2001. Predicting vegetation trajectories on landscapes: integrating chronic herbivory with episodic disturbances. International Conference on Forest Dynamics and Ungulate herbivory, Davos, Switzerland, 3-6 October 2001.

102. Ager, Alan A., Haiganoush K. Preisler, David R. Brillinger, Bruce K. Johnson, and **John G. Kie**. 2001. Foraging and movement dynamics of elk and deer on a large landscape. 2001. International Conference on Forest Dynamics and Ungulate herbivory, Davos, Switzerland, 3-6 October 2001.

101. Johnson, Bruce K., Alan A. Ager, Martin Vavra, Priscilla K. Coe, Scott L. Findholt, **John G. Kie**, Michael J. Wisdom, John G. Cook, Robert A. Riggs, and Timothy DelCurto. 2001. Applications of multi-species stocking allocation models to study herbivory in the Interior West, USA. International Conference on Forest Dynamics and Ungulate herbivory, Davos, Switzerland, 3-6 October 2001.

100. Findholt, Scott L., Damiran Daalkhaijav, Bruce. K. Johnson, Tim DelCurto, and **John G. Kie.** 2001. Inter- and intra specific summer foraging dynamics of mule deer, elk, and cattle. Annual Meeting of The Wildlife Society, Reno, Nevada, 25-29 September 2001.

99. Ager, Alan A., Haiganoush K. Preisler, David R. Brillinger, Bruce K. Johnson, and **John G. Kie**. 2001. Crepuscular movements patterns of Rocky Mountain elk and mule deer in spring. Annual Meeting of The Wildlife Society, Reno, Nevada, 25-29 September 2001.

98. Bowyer, R. Terry, Stewart, Kelley M., and **John G. Kie**, and William C. Gassaway. 2000. Fluctuating asymmetry in antlers of Alaskan moose: size matters. Annual Meeting of The Wildlife Society, Reno, Nevada, 25-29 September 2001.

97. Stewart, Kelley M., R. Terry Bowyer, and **John G. Kie**. 2001. Using stable isotope analysis to differentiate nutrient inputs to ecosystems among large herbivores. Annual Meeting of The Wildlife Society, Reno, Nevada, 25-29 September 2001.

96. **Kie, John G.,** and R. Terry Bowyer. 2001. Sexual segregation in large mammals: the importance of a spatial definition. Annual Meeting of The Wildlife Society, Reno, Nevada, 25-29 September 2001.

95. Preisler, Haiganoush K., Alan A. Ager, R. Patrick Akers, David R. Brillinger, and **John G. Kie**. 2001. Stochastic differential equations as a tool for studying animal movement. International Union of Forestry Research Organizations, Conference on Forest Biometry, Modelling and Information Science, Greenwich, United Kingdom, 25-29 June 2001.

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92. Stewart, Kelley M., R. Terry Bowyer, and **John G. Kie**. 2001. Using stable isotope analysis to differentiate nutrient inputs to ecosystems among large herbivores. Annual Meeting of the American Society of Mammalogists, Missoula, Montana, 16-20 2001.

91. **Kie, John G.**, James H. Noyes, Bruce K. Johnson, Rosemary J. Stussy, Christen L. Williams, and Olin E. Rhodes, Jr. 2001. Reproductive performance in Rocky Mountain elk. Annual Meeting of the American Society of Mammalogists, Missoula, Montana, 16-20 June 2001.

90. Bowyer, R. Terry, and **John G. Kie**. 2001. Effects of foraging efficiency on sexual segregation in mule deer. Annual Meeting of the Northwest Section of The Wildlife Society, Banff, Alberta, Canada, 2-4 March 2001.

89. Stewart, Kelley M., R. Terry Bowyer, and **John G. Kie**. 2001. Using stable isotope analysis to differentiate nutrient inputs to ecosystems among large herbivores. Annual Meeting of the Northwest Section of The Wildlife Society, Banff, Alberta, Canada, 2-4 March 2001.

88. Stewart, Kelley M., R. Terry Bowyer, and **John G. Kie**, and William C. Gassaway. 2000. Fluctuating asymmetry in antlers of Alaskan moose: size matters. Annual Meeting of the American Society of Mammalogists, Durham, New Hampshire, 17-21 June 2000.

87. Bowyer, R. Terry, Stewart, Kelley M., and **John G. Kie**, and William C. Gassaway. 2000. Fluctuating asymmetry in antlers of Alaskan moose: size matters. 36th North American Moose Conference and Workshop, Whitehorse, Yukon, 5-10 June 1999.

86. **Kie, John G.**, Alan A. Ager, John W. Kern, and Bruce K. Johnson. 2000. Fine scale movements and habitat use by elk and mule deer in northeastern Oregon. Annual Meeting of the American Society of Mammalogists, Durham, New Hampshire, 17-21 June 2000.

85. Garton, Edward O., Frederick A. Leban, Michael J. Wisdom, Bruce K. Johnson, and **John G. Kie.** 2000. Experimental design considerations for radiotelemetry studies. Annual Meeting of the Northwest Section of The Wildlife Society, Post Falls, Idaho, 6-10 March 2000.

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80. Bowyer, R. Terry, Victor Van Ballenberghe, **John G. Kie**, and Julie A. K. Maier. 1999. Timing of parturition and birth-site selection by Alaskan moose: maternal strategies for coping with a risky and variable environment. 50th Arctic Science Conference, Denali National Park, Alaska, 19-22 September 1999.

79. **Kie, John G.,** Alan A. Ager, Haiganoush K. Preisler, David R. Brillinger, and Brent S. Stewart. 1999. Using models based on stochastic differential equations with time- and location-dependent covariates to portray animal movements. Annual Meeting of The Wildlife Society, Austin, Texas, 7-11 September 1999.

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74. Johnson, Bruce K., Priscilla K. Coe, John W. Kern, Scott L. Findholt, and **John G. Kie**. 1999. Interactions among wild and domestic ungulates at three spatial scales in summer. Ecology and Management of Ungulates: Integrating Across Spatial Scales, Nelson, British Columbia, 24-28 August 1999.

73. Johnson, Bruce K., John W. Kern, Michael J. Wisdom, Scott L. Findholt, and **John G. Kie**. 1999. Predicting spatial distributions of elk and mule deer in montane habitats during spring. Ecology and Management of Ungulates: Integrating Across Spatial Scales, Nelson, British Columbia, 24-28 August 1999.

72. Brillinger, David R., Haiganoush K. Preisler, Alan A. Ager, and **John G. Kie**. 1999. Um exemplo da combinacao de uma analise estatistica do movimento e da informacao de um GIS. Biennial Meeting Brazilian Group on Time Series and Econometrics. Nova Friburgo, Brazil.

71. Brillinger, David R., Haiganoush K. Preisler, Alan A. Ager, and **John G. Kie**. 1999. Estudo estatistico das trajectorias de particulos como as de alces. Biennial Meeting of the Brazilian Statistical Society. Rio de Janeiro, Brazil.

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68. Stewart, Kelley M., R. Terry Bowyer, and **John G. Kie**, and William C. Gassaway. 1999. Antler size relative to body mass in cervids: tradeoffs associated with reproduction. 35th North American Moose Conference and Workshop, Grand Portage, Minnesota, 15-20 May 1999.

67. Stewart, Kelley M., R. Terry Bowyer, and **John G. Kie**, and William C. Gassaway. 1999. Antler size relative to body mass in cervids: tradeoffs associated with reproduction. Symposium on Women In Science, University of Alaska Fairbanks, 8-9 April 1999.

66. Stewart, Kelley M., **John G. Kie,** R. Terry Bowyer, Norm J. Cimon. 1999. Competition among sympatric ungulates: exploitation or interference? Symposium on Women In Science, University of Alaska Fairbanks, 8-9 April 1999.

65. Stewart, Kelley M., R. Terry Bowyer, and **John G. Kie**, and William C. Gassaway. 1999. Antler size relative to body mass in cervids: tradeoffs associated with reproduction. Annual Meeting of the Alaska Chapter of The Wildlife Society, Fairbanks, Alaska. 7 April 1999.

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63. Bowyer, R. Terry, Victor Van Ballenberghe, **John G. Kie**, and Julie A. K. Maier. 1999. Birth-site selection by Alaskan moose: maternal strategies for coping with a risky environment. Annual Meeting of the Alaska Chapter of The Wildlife Society, Fairbanks, Alaska. 7 April 1999.

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59. **Kie, John G.,** and R. Terry Bowyer. 1999. Sexual segregation in white-tailed deer: density-dependent changes in use of space, habitat selection, and dietary niche. Annual Meeting of the Oregon Chapter of The Wildlife Society, Gleneden Beach, Oregon, 10-12 February 1999.

58. Stewart, Kelley M., **John G. Kie,** and R. Terry Bowyer. 1998. Habitat selection among sympatric ungulates; resource partitioning in a montane environment. Annual meeting of The Wildlife Society, Buffalo, New York, 22-26 September 1998.

57. Brillinger, David R., Haiganoush K. Preisler, Alan A. Ager, and **John G. Kie**. 1998. Etude statistique des meandres des particules. Biennial Meeting of the Brazilian Statistical Society. Caxambu, Brazil.

56. Stewart, Kelley M., R. Terry Bowyer, and **John G. Kie**. 1998. Spatial distribution of elk, mule deer, and cattle in northeast Oregon. Euro-American Mammal Congress, Santiago de Compostela, Spain, 19-24 July 1998.

55. Stewart, Kelley M., R. Terry Bowyer, and **John G. Kie**. 1998. Spatial distribution of elk, mule deer, and cattle in northeast Oregon. Annual Meeting of the American Society of Mammalogists, Blacksburg, Virginia, 6-10 June 1998.

54. Rowland, Mary, Michael J. Wisdom, Bruce K. Johnson, and **John G. Kie**. 1998. Elk habitat selection in relation to roads. Annual Meeting of the Northwest Section of The Wildlife Society, Spokane, Washington, 6-10 April 1998.

53. Bowyer, R. Terry, Vic Van Ballenberghe, and **John G. Kie**. 1998. Timing and synchrony of reproduction in Alaskan moose: long-term versus proximal effects of climate. Annual Meeting of the Northwest Section of The Wildlife Society, Spokane, Washington, 6-10 April 1998.

52. **Kie, John G.**, Matthew C. Nicholson, R. Terry Bowyer, Brian B. Boroski, and Eric R. Loft. 1998. The role of landscape structure on the size of home ranges in mule deer. Annual Meeting of the Northwest Section of The Wildlife Society, Spokane, Washington, 6-10 April 1998.

51. Nicholson, Matthew C., **John G. Kie**, R. Terry Bowyer, Brian B. Boroski, and Eric R. Loft. 1998. The role of landscape structure on the size of home ranges in mule deer. Annual Meeting of the International Association of Landscape Ecologists, East Lansing, Michigan, 17-21 March 1998.

50. Boroski, Brian B., Reginald H. Barrett, and **John G. Kie**. 1998. Movement patterns and survivorship of black-tailed deer (*Odocoileus hemionus columbianus*) crossing a reservoir in northern California. Annual Meeting of the Western Section of The Wildlife Society, Sacramento, California, 12-14 February 1998.

49. Brillinger, David R., Haiganoush K. Preisler, Alan A. Ager, and **John G. Kie**. 1998. Analysis of movements of free ranging animals using potential functions. Winter Meeting of the Canadian Mathematical Society. Kingston, Canada.

48. Bowyer, R. Terry, Vic Van Ballenberghe, and **John G. Kie**. 1998. Timing and synchrony of reproduction in Alaskan moose: long-term versus proximal effects of climate. Annual Meeting of the Alaska Chapter of The Wildlife Society, Girdwood, Alaska, 16 January 1998.

47. Johnson, Bruce K., Scott L. Findholt, Alan A. Ager, Michael J. Wisdom, and **John G. Kie**. 1997. Performance of a Loran-C based automated animal telemetry system. Annual meeting of The Wildlife Society, Snowmass, Colorado, 20-23 September 1997.

46. Boroski, Brian B., Reginald H. Barrett, Irene C. Timossi, and **John G. Kie**. 1997. Effect of planimetric and true surface models on assessing macrohabitat selection. Annual meeting of The Wildlife Society, Snowmass, Colorado, 23-26 September 1997.

45. **Kie, John G.**, and R. Terry Bowyer. 1997. Sexual segregation in white-tailed deer: density dependent changes in use of space, habitat selection, and dietary niche. Seventh International Theriological Congress, Acapulco, Mexico, 7-11 September 1997.

44. Bowyer, R. Terry, Victor C. Van Ballenberghe, and **John G. Kie**. 1997. Timing and synchrony of parturition in Alaskan moose: long-term versus proximal effects of climate. Seventh International Theriological Congress, Acapulco, Mexico, 7-11 September 1997.

43. **Kie, John G.**, Michael J. Wisdom, Alan A. Ager, Bruce K. Johnson, and E.O. Garton. 1997. Using random-walk animals to adjust null hypotheses for tests of habitat selection. Annual Meeting of the American Society of Mammalogists, Stillwater, Oklahoma, 14-18 June 1997.

42. Boroski, Brian B., Reginald H. Barrett, Irene C. Timossi, and **John G. Kie**. 1997. Effect of planimetric and true surface models on estimates of home range areas. Annual meeting of the Western Section of The Wildlife Society, San Diego, California, 5-8 February 1997.

41. **Kie, John G.**, Brian B. Boroski, Matthew C. Nicholson, Eric R. Loft, and R. Terry Bowyer. 1996. Landscape correlates to home-range size in mule deer (*Odocoileus hemionus*). Annual meeting of The Wildlife Society, Cincinnati, Ohio, 1-6 October 1996.

40. **Kie, John G.**, Brian B. Boroski, Matthew C. Nicholson, Eric R. Loft, and R. Terry Bowyer. 1996. Landscape correlates to home-range size in mule deer (*Odocoileus hemionus*). Joint annual meeting of the Ecological Society of America and the Society for Conservation Biology, Providence, Rhode Island, 11-15 August 1996.

39. Bowyer, R. Terry, **John G. Kie**, and Victor Van Ballenberghe. 1996. Habitat selection by neonatal black-tailed deer: effects of forage and predation risk. Annual meeting of the American Society of Mammalogists, Grand Forks, North Dakota, 15-19 June 1996.

38. **Kie, John G.**, Brian B. Boroski, Matthew C. Nicholson, Eric R. Loft, and R. Terry Bowyer. 1996. Landscape correlates to home-range size in mule deer (*Odocoileus hemionus*), revisited. Annual meeting of the American Society of Mammalogists, Grand Forks, North Dakota, 15-19 June 1996.

37. Brian B. Boroski, Susan Draper, Reginald Barrett, and **John G. Kie**. 1996. Observer bias in the detection of habitat elements in the California Wildlife Habitat Relationships System. Annual Meeting of the Western Section of The Wildlife Society, Sparks, Nevada, 1-3 February 1996.

36. **Kie, John G.**, and Brian B. Boroski. 1996. Using spotlight counts to estimate mule deer population sizes and trends. Annual Meeting of the Western Section of The Wildlife Society, Sparks, Nevada, 1-3 February 1996.

35. Kitchens-Maier, Julie A., R. Terry Bowyer, Victor Van Ballenberghe, and **John G. Kie**. 1995. The role of GIS in understanding biological processes: insights from landscape variables. American Association for the Advancement of Science, Arctic Chapter, 46th Arctic Science Conference, Fairbanks, Alaska, 18-22 September 1995.

34. Bowyer, R. Terry, **John G. Kie**, and Victor Van Ballenberghe. 1995. Sexual segregation in black-tailed deer: effects of scale. American Association for the Advancement of Science, Arctic Chapter, 46th Arctic Science Conference, Fairbanks, Alaska, 18-22 September 1995.

33. **Kie, John G.**, James A. Baldwin, and Charles J. Evans. 1995. CALHOME: a microcomputer program for home range analysis. American Association for the Advancement of Science, Arctic Chapter, 46th Arctic Science Conference, Fairbanks, Alaska, 18-22 September 1995.

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31. Nicholson, Matthew C., R. Terry Bowyer, and **John G. Kie**. 1995. Habitat selection and survival of mule deer: tradeoffs associated with migration. Annual meeting of the American Society of Mammalogists, Burlington, Vermont, 20-24 June 1995.

30. Boroski, Brian B., and **John G. Kie**. 1995. Winter use of habitats by black-tailed deer (*Odocoileus hemionus columbianus*) on a foothill range of the Sierra Nevada. Annual meeting of the American Society of Mammalogists, Burlington, Vermont, 20-24 June 1995.

29. **Kie, John G.**, and Brian B. Boroski. 1995. Landscape correlates to home range size in black-tailed deer (*Odocoileus hemionus columbianus*). Annual meeting of the American Society of Mammalogists, Burlington, Vermont, 20-24 June 1995.

28. Boroski, Brian B., Reginald H. Barrett, Irene C. Timosi, and **John G. Kie**. 1995. Modelling habitat suitability for black-tailed deer (*Odocoileus hemionus columbianus*) in heterogeneous habitats. Conference on Ungulates in Temperate Forest Ecosystems, Wageningen, Netherlands, 23-27 April 1995.

27. **Kie, John G.**, James A. Baldwin, and Charles J. Evans. 1995. CALHOME: a microcomputer program for home range analysis. Conference on Ungulates in Temperate Forest Ecosystems, Wageningen, Netherlands, 23-27 April 1995.

26. **Kie, John G.** 1995. Optimal foraging in mule deer (*Odocoileus hemionus*): the role interspecific competition with domestic cattle. Conference on Ungulates in Temperate Forest Ecosystems, Wageningen, Netherlands, 23-27 April 1995.

25. Bowyer, R. Terry, **John G. Kie**, and Victor Van Ballenberghe. 1994. Effects of scale on measurement of sexual segregation in black-tailed deer. Annual meeting of the American Society of Mammalogists, Washington, DC, 18-23 June 1994.

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23. Van Ballenberghe, Victor, R. Terry Bowyer, and **John G. Kie**. 1994. Birth site selection by female moose in central Alaska. 30th Annual North American Moose Conference and Workshop, Idaho Falls, Idaho, 27 March-1 April 1994.

22. Boroski, Brian B., **John G. Kie**, and Eric R. Loft. 1991. Compatible relationships between deer and cattle in the Sierra Nevada of California: searching for solutions. Livestock-Big Game: Seeking Common Ground on Western Rangelands, Sparks, Nevada, 18-20 September 1991.

21. Teer, James G., D. Lynn Drawe, Terry L. Blankenship, William F. Andelt, Robert S. Cook, **John G. Kie**, Frederick F. Knowlton, and Marshall White. 1991. Deer and coyotes: the Welder experiments. North American Wildlife and Natural Resources Conference, Edmonton, Alberta, 22-27 March 1991.

20. Updike, Douglas R., Eric R. Loft, John B. Loomis, and **John G. Kie**. 1991. Bioeconomics of livestock-deer interactions in the Sierra Nevada. Annual meeting of the Western Section of The Wildlife Society, Sacramento, California, 7-9 February 1991.

19. **Kie, John G.** 1991. Wildlife and livestock grazing alternatives in the Sierra Nevada. Annual meeting of the Western Section of The Wildlife Society, Sacramento, California, 7-9 February 1991.

18. **Kie, John G.** 1990. Optimal foraging in mule deer: effects of competition with domestic cattle. Joint Meeting of American Society of Mammalogists and La Sociedad Argentina Para El Estudio De Los Mamiferos, Buenos Aires, Argentina, 17-20 June 1990.

17. Loft, Eric R., Charles J. Evans, Kim Ragotzkie, and **John G. Kie**. 1989. Design and accuracy considerations for telemetry studies: some examples from ungulates. Annual meeting of the Western Section of The Wildlife Society, Redding, California, 26-28 January 1989.

16. **Kie, John G.**, and Eric R. Loft. 1988. Optimal foraging in deer: effects of competition with domestic cattle. AIBS/Ecological Society of America meetings, Davis, California, 15-19 August 1988.

15. **Kie, John G.** and Eric R. Loft. 1988. Optimal foraging in deer: effects of competition with domestic cattle. Ungulate Behavior and Ecology Conference, Texas A&M University, College Station, Texas, 23-27 May 1988.

14. Winckel, Joy, Emelio A. Laca, Montague W. Demment, and **John G. Kie**. 1988. Mule deer feeding behavior: response of the components of intake to nutritional environments grazed and ungrazed by cattle. Annual meeting of the Society for Range Management, Corpus Christi, Texas, 22-26 February 1988.

13. Eric R. Loft, John W. Menke, and **John G. Kie**. 1988. Competition between mule deer and cattle in meadow-riparian and aspen communities. Annual meeting of the Society for Range Management, Corpus Christi, Texas, 22-26 February 1988.

12. **Kie, John G.**, Eric R. Loft, John W. Menke, Joy Winckel, and Montague Demment. 1988. Managing mule deer and cattle on Sierra Nevada summer range in California. Annual meeting of the Society for Range Management, Corpus Christi, Texas, 22-26 February 1988.

11. **Kie, John G.**, Eric R. Loft., John W. Menke, Joy Winckel, and Montague W. Demment. 1988. Managing mule deer and cattle on Sierra Nevada summer range in California. Annual meeting of the Western Section of The Wildlife Society, Hilo, Hawaii, 10-13 February 1988.

10. Andelt, William F., **John G. Kie**, Frederick F. Knowlton, and Kean Cardwell. 1986. Coyote diets vary with season and successional changes in vegetation. Annual Midwest Fish and Wildlife Conference, Omaha, Nebraska, 7-10 December 1986.

9. Loft, Eric R., John W. Menke, and **John G. Kie**. 1986. Mule deer and cattle habitat preferences in the Sierra Nevada Mountains. Annual meeting of the Society for Range Management, Kissimmee, Florida, 9-14 February 1986.

8. **Kie, John G.**, Charles J. Evans, Eric R. Loft, and John W. Menke. 1986. Cattle and mule deer activity patterns in the Sierra Nevada. Annual meeting of the Society for Range Management, Kissimmee, Florida, 9-14 February 1986.

7. Loft, Eric R., John W. Menke, and **John G. Kie**. 1986. Influence of cattle grazing pressure on mule deer in the Sierra Nevada. Annual meeting of the Western Section of The Wildlife Society, Sparks, Nevada, 23-25 January 1986.

6. Winckel, Joy, Montague W. Demment, and **John G. Kie**. 1985. Response of mule deer feeding behavior and activity patterns to stocking levels of cattle in mountain meadows. Annual meeting of the Society for Range Management, Salt Lake City, Utah, 11-15 February 1985.

5. Loft, Eric R., John W. Menke, and **John G. Kie**. 1985. Spatial relationships and movement patterns of deer and cattle in Sierra Nevada mountain meadow areas. Annual meeting of the Society for Range Management, Salt Lake City, Utah, 11-15 February 1985.

4. Evans, Charles J., Scott Willems, and **John G. Kie**. 1985. Automating collection of cattle activity information. Annual meeting of the Society for Range Management, Salt Lake City, Utah, 11-15 February 1985.

3. **Kie, John G.** 1985. Nutritive quality of deerbrush and mountain whitethorn shrubs. Annual meeting of the Society for Range Management, Salt Lake City, Utah, 11-15 February 1985.

2. **Kie, John G.** 1983. Production estimates for *Ceanothus cordulatus and C. integerrimus* in the central Sierra Nevada of California. Annual meeting of the Society for Range Management, Albuquerque, New Mexico, 14-17 February 1983.

1. **Kie, John G.** 1979. Indicators of condition in white-tailed deer. Annual meeting of the American Society of Mammalogists, Corvallis, Oregon, 17-21 June 1979.

5. Participation in Technical Conferences and Workshops

a. Conference and symposium chairs

19. Session Chair, Landscape Disturbance I. Annual meeting of the United States Regional Association of the International Association for Landscape Ecology (US IALE), Madison, Wisconsin, 6-10 April 2008.

18. Symposium Co-Chair (with Dean Anderson, United States Forest Service; and Herbert Prins, Wageningen University, The Netherlands). Animals on Thermal Landscapes. International Association for Landscape Ecology World Congress, Wageningen, Netherlands, 8-12 July 2007.

17. Symposium Co-Chair (with Arthur R. Rodgers, Ontario Ministry of Natural Resources; Christopher O. Kochanny, Advanced Telemetry Systems, Inc.; and Joshua J. Millspaugh, University of Missouri). Kernel Methods in Space Use Analyses. Annual meeting of The Wildlife Society, Madison, Wisconsin, 25-29 September 2005.

16. Symposium Co-chair (with R. Terry Bowyer, Idaho State University). Large Mammals: Landscapes and Life Histories. International Mammalogical Congress IX, Sapporo, Hokkaido, Japan, 31 July-5 August 2005.

15. Session Chair, Contributed Papers. Annual Meeting of the Northwest Section of The Wildlife Society, Girdwood, Alaska, 1-3 May 2004.

14. Session Chair, Morphology and Techniques. Annual meeting of the American Society of Mammalogists, Lake Charles, Louisiana, 15-19 June 2002.

13. Symposium Co-Chair (with R. Terry Bowyer, University of Alaska Fairbanks). Sexual Segregation in Mammalian Herbivores. 8th International Theriological Congress, Sun City, South Africa, 12-17 August 2001.

12. Session Chair, Population Ecology III. Annual meeting of the American Society of Mammalogists, Durham, New Hampshire, 17-21 June 2000.

11. Session Chair, Ungulates. Annual Meeting of the Oregon Chapter of The Wildlife Society, Gleneden Beach, Oregon, 10-12 February 1999.

10. Symposium Co-Chair (with Sip E. van Wieren and Herbert H. T. Prins, Wageningen Agricultural University, Netherlands). The Role of Large Herbivores as Keystone Species in Restoration Ecology. Euro-American Mammal Congress, Santiago de Compostela, Spain, 19-24 July 1998.

9. Symposium Co-Chair (with R. Terry Bowyer, University of Alaska Fairbanks). Life History Strategies of Ungulates: An Evolutionary Perspective. Annual meeting the American Society of Mammalogists, Blacksburg, Virginia, 6-10 June 1998.

8. Symposium Co-Chair (with R. Terry Bowyer, University of Alaska Fairbanks). Sexual Segregation in Ungulates: Reconciling Alternate Hypotheses. Annual meeting of The Wildlife Society, Snowmass, Colorado, 23-26 September 1997.

7. Session Chair, Monitoring: Why Do It and How Good Does It Need To Be? Annual Meeting of the Western Section of The Wildlife Society, Sparks, Nevada, 1-3 February 1996.

6. Session Chair, Species at Risk: Ungulates. Annual Meeting of the Western Section of The Wildlife Society, San Diego, California, 7-8 February 1992.

5. Panel Chair, Additive versus Compensatory Mortality in Deer, Western States and Provinces Deer Workshop, Asilomar State Beach and Conference Center, Pacific Grove, California, 27-30 August 1991.

4. Program Chair, Annual Meeting of the Western Section of The Wildlife Society, Hilo, Hawaii, 10-13 February 1988,

3. Co-organizer, Continuing Education Shortcourse in Deer Habitat Management in the Sierra Nevada, Western Section of The Wildlife Society, Oakhurst, California, 13-16 September 1988.

2. Session Chair, Interactions of Domestic Livestock and Range Wildlife, Annual Meeting of the Western Section of The Wildlife Society, Sparks, Nevada, 23-25 January 1986.

1. Session Chair, Wildlife Research and Management, Annual Meeting of the Western Section of The Wildlife Society, Redding, California, 6-8 February 1980.

b. Presentations at workshops

41. Kie, John G. 2007. Participation and presentation at the Mule Deer Workshop, sponsored by Idaho Department of Fish and Game; 4 August 2007.

40. **Kie, John G.** 2006. Introduction. Home range and animal movements: a workshop. Idaho State University, Pocatello, Idaho, 15-16 May 2006.

39. **Kie, John G.** 2006. On the importance of choosing a bandwidth in kernel home-range analyses. Home range and animal movements: a workshop. Idaho State University, Pocatello, Idaho, 15-16 May 2006.

38. **Kie, John G.** 2006. GIS software for home-range analysis. Home range and animal movements: a workshop. Idaho State University, Pocatello, Idaho, 15-16 May 2006.

37. Bowyer, R. Terry, Vernon C. Bleich, **John G. Kie**, and Perry S. Barboza. 2005. Evolutionary models for sexual segregation among ruminants: competition or polygyny? 41st North American Moose Conference and Workshop, Whitefish, Montana, 22-26 May 2005.

36. Long, Ryan A., Janet L. Rachlow, and **John G. Kie**. 2005. A niche-based framework for evaluating species- and sex-specific responses of elk and mule deer to forest fuels reduction. Western States and Provinces Deer and Elk Workshop, Reno, Nevada, 16-19 May 2005.

35. Stewart, Kelley M., R. Terry Bowyer, **John G. Kie,** Brian L. Dick, and Merav Ben-David. 2003. Niche relationships among three large herbivores: resource partitioning and competitive displacement. Rocky Mountain Elk Foundation, Professional Biologists Workshop. Reno, Nevada, 26 February 2003.

34. Stewart, Kelley M., R. Terry Bowyer, and **John G. Kie**. 2003. Effects of elk population density on ecosystem processes. Rocky Mountain Elk Foundation, Professional Biologists Workshop. Reno, Nevada, 26 February 2003.

33. **John G. Kie**. 2002. Forest fuels reduction and herbivory by wild and domestic ungulates. Workshop on Integration: Linking Forests, People's Values, and Economics. Oregon Chapter, Society of American Foresters. La Grande, Oregon, 9 May 2002.

32. **John G. Kie**. 2001. The intensive timber management study. Elk, Mule deer, and Cattle in Managed Forests: A Workshop for Managers, La Grande, Oregon, 5-6 September 2001.

31. **John G. Kie**. 2001. Herbivory as an ecosystem process. Elk, Mule deer, and Cattle in Managed Forests: A Workshop for Managers, La Grande, Oregon, 5-6 September 2001.

30. Stewart, Kelley M., R. Terry Bowyer, and **John G. Kie**. 2001. Using stable isotope analysis to differentiate nutrient inputs to ecosystems among large herbivores. Elk, Mule deer, and Cattle in Managed Forests: A Workshop for Managers, La Grande, Oregon, 5-6 September 2001.

29. **Kie, John G.,** Alan A. Ager, Haiganoush K. Preisler, David R. Brillinger, and Brent S. Stewart. 1999. Using models based on stochastic differential equations with time- and location-dependent covariates to portray animal movements. Elk, Mule deer, and Cattle in Managed Forests: A Workshop for Managers, La Grande, Oregon, 5-6 September 2001.

28. Coe, Priscilla K., Bruce K. Johnson, Scott L. Findholt, Alan A Ager, Tim DelCurto, **John G. Kie**, and Michael J. Wisdom. 2001. Interactions of elk, mule deer, and cattle in spring, summer, and fall. Western States and Provinces Deer and Elk Workshop, Wilsonville, Oregon, 1-4 August 2001.

27. Noyes, James, Bruce K. Johnson, **John G. Kie**, and Brian L. Dick. 2001. Effect of archery hunting seasons on pregnancy rates and conception dates of elk: a preliminary view. Western States and Provinces Deer and Elk Workshop, Wilsonville, Oregon, 1-4 August 2001.

26. Noyes, James H., Rosemary J. Stussy, Christen L. Williams, Brian L. Dick, Olin E Rhodes, Jr., **John G. Kie**, and Bruce. K. Johnson. 2001. Preliminary assessment of paternity and birth dates of calf elk sired by mixed age classes of bulls. Western States and Provinces Deer and Elk Workshop, Wilsonville, Oregon, 1-4 August 2001.

25. Vavra, Martin, Robert A. Riggs, Bruce K. Johnson, Micheal J. Wisdom, **John G. Kie**, John G. Cook, Alan A Ager. 2001. Changing landscapes and deer and elk: how do large ungulates fit in? Western States and Provinces Deer and Elk Workshop, Wilsonville, Oregon, 1-4 August 2001.

24. Ager, Alan A., Bruce K. Johnson, **John G. Kie**, and John W. Kern. 2001. Fine scale movements and habitat use by elk and mule deer in northeastern Oregon. Western States and Provinces Deer and Elk Workshop, Wilsonville, Oregon, 1-4 August 2001.

23. Ager, Alan A., Haiganoush K. Preisler, David R. Brillinger, Bruce K. Johnson, and **John G. Kie**. 2001. Crepuscular movements patterns of Rocky Mountain elk and mule deer in spring. Western States and Provinces Deer and Elk Workshop, Wilsonville, Oregon, 1-4 August 2001.

22. Findholt, Scott L., Damiran Daalkhaijav, Bruce. K. Johnson, Tim DelCurto, and **John G. Kie.** 2001. Inter- and intra specific summer foraging dynamics of mule deer, elk, and cattle. Western States and Provinces Deer and Elk Workshop, Wilsonville, Oregon, 1-4 August 2001.

21. Johnson, Bruce K., John Kern, Michael J. Wisdom, Scott Findholt, and **John G. Kie.** 1999. Habitat selection and spatial segregation of elk and mule deer during spring in montane environments. Western States and Provinces Deer and Elk Workshop, Salt Lake City, Utah, 3-5 March 1999.

20. Wisdom, Michael J., Norman J. Cimon, Bruce K. Johnson, Edward O. Garton, Larry D. Bryant, Jack Ward Thomas, and **John G. Kie.** 1999. Distribution and spatial partitioning of mule deer and elk in relation to traffic. Western States and Provinces Deer and Elk Workshop, Salt Lake City, Utah, 3-5 March 1999.

19. Johnson, Bruce K., Michael J. Wisdom, John G. Cook, and **John G. Kie**. 1998. Elk and managed forests: what science tells us. Rocky Mountain Elk Foundation 14th Annual Meeting and Professional Biologists Workshop, Portland, Oregon, 18 February 1998.

18. Boroski, Brian B., Reginald H. Barrett, Irene C. Timossi, and **John G. Kie**. 1997. Development and testing of a spatially explicit California Wildlife Habitat Relationships (CWHR) model for black-tailed deer (*Odocoileus hemionus columbianus*) in Trinity County, California. Workshop on Modeling Complex Systems for Environmental Decision-Making, Fort Collins, Colorado, 19-22 May 1997.

17. **Kie, John G.** 1995. Recent advances in ground and space-borne techniques for tracking large animals. Fourth Annual Natural Resources GIS/GPS Training, Conference, and Exhibition, Columbia, California, 5-7 June 1995.

16. **Kie, John G.**, James A. Baldwin, and Charles J. Evans. 1995. CALHOME: a microcomputer program for home range analysis. Western States and Provinces Joint Mule Deer and Elk Workshop, Sun Valley, Idaho, 23-25 May 1995.

15. **Kie, John G.** 1994. Using Navstar GPS technology in wildlife research. U.S. Forest Service Region 5 GPS Workshop, Sacramento, California, 5-6 April 1994.

14. **Kie, John G.**, and R. Terry Bowyer. 1993. Sexual segregation among black-tailed deer in Trinity County, California. Workshop on Sexual Segregation in Ungulates, Humboldt State University, Arcata, California, 1-2 August 1993.

13. **Kie, John G.**, R. Terry Bowyer, and Victor Van Ballenberghe. 1993. Neonatal habitat selection in subarctic and temperate ungulates: synthesizing the roles of predation risk, forage, and climate. U.S. Forest Service, Pacific Southwest Research Station Scientists Meeting, Asilomar State Beach and Conference Center, Pacific Grove, California, 1-2 April 1993.

12. Frank Chan, and **John G. Kie**. 1988. Planting, seeding, and fertilization methods. Deer Habitat Management Shortcourse, Western Section of The Wildlife Society, Oakhurst, California, 13-16 September 1988.

11. **Kie, John G.** 1988. Coordinating deer habitat management with range management objectives. Deer Habitat Management Shortcourse, Western Section of The Wildlife Society, Oakhurst, California, 13-16 September 1988.

10. **Kie, John G.** 1988. Evaluating habitat improvements: how do we know we've benefited deer? Deer Habitat Management Shortcourse, Western Section of The Wildlife Society, Oakhurst, California, 13-16 September 1988.

9. **Kie, John G.** 1988. Coyote control and white-tailed deer in Texas. Predator Management Seminar, California Department of Fish and Game, Fresno, California, 7 May 1988.

8. **Kie, John G.**, Ron Bertram, Eric R. Loft, and John W. Menke. 1988. Managing mule deer and cattle on Sierra Nevada summer range in California. Statewide Meeting of California Department of Fish and Game Wildlife Biologists, Oakhurst, California, 3-5 May 1988.

7. Loft, Eric R., John W. Menke, and **John G. Kie**. 1987. Influence of cattle stocking rate on habitat selection by mule deer. Western States and Provinces Deer Workshop, Pingree Park, Colorado, 4-7 August 1987.

6. **Kie, John G.** 1987. Evaluating habitat improvements: how do we know we've benefited deer? Western States and Provinces Deer Workshop, Pingree Park, Colorado, 4-7 August 1987.

5. **Kie, John G.** 1985. Fertilization and grazing exclusion effects on two meadows in the Sierra Neavada. Sierra National Forest Biologists Workshop, Fresno, California, 29 October 1985.

4. **Kie, John G.** 1985. Nutritive quality of *Ceanothus* shrubs. Sierra National Forest Biologists Workshop, Fresno, California, 29 October 1985.

3. **Kie, John G.** 1982. Livestock grazing/wildlife relationships in the central Sierra Nevada. Workshop on Multiple Resource Management in Central Sierra Regenerated Stands, Society of American Foresters, The Wildlife Society, Society for Range Management, Fresno, California, 11 September 1982.

2. **Kie, John G.** 1982. Interactions between animal species on rangelands. Continuing Education in Wildlife Biology and Management, The Wildlife Society, Oroville, California, 1-5 March 1982.

1. **Kie, John G.** 1981. Wildlife population analysis. Continuing Education in Wildlife Biology and Management, Western Section of The Wildlife Society, Georgetown, California, 2-6 March 1981.

C. Scientific Accomplishments and Contributions

Available on request

D. Disseminating Research Results

1. Publications

104. Long, Ryan A., Jonathan D. Muir, Janet L. Rachlow, and **John G. Kie.** 2009. Sex specific responses of North American elk to fuels reduction. In press, Journal of Mammalogy (refereed journal).

103. Long, Ryan A., Jonathan D. Muir, Janet L. Rachlow, and **John G. Kie.** 2009. A comparison of two modeling approaches for evaluating wildlife-habitat relationships. Journal of Wildlife Management 73:294-302 (refereed journal).

102. Long, Ryan A., Janet L. Rachlow, **John G. Kie**, and Martin Vavra. 2008. Fuels reduction in a western coniferous forest: effects on quantity and quality of forage for elk. Rangeland Ecology and Management 61:302-313 (refereed journal).

101. Long, Ryan A., Janet L. Rachlow, and **John G. Kie**. 2008. Effects of and scale on response of elk and mule deer to habitat manipulation. Journal of Wildlife Management 72:1133-1142 (refereed journal).

100. Stewart, Kelley, R. Terry Bowyer, Roger W. Ruess, Brian L. Dick, and **John G. Kie**. 2006. Herbivore optimization by North American elk: consequences for theory and management. Wildlife Monographs 167:1-24 (refereed monograph).

99. Bowyer, R. Terry, and **John G. Kie**. 2006. Effects of scale on interpreting life-history characteristics of ungulates and carnivores. Diversity and Distributions 12:244-257 (refereed journal).

98. Nicholson, Matthew C., R. Terry Bowyer, and **John G. Kie**. 2006. Forage selection by mule deer: does niche breadth increase with population density? Journal of Zoology 269:39-49 (refereed journal).

Of the following 97 citations, 62 appeared in refereed journals. In January 2005, I conducted an ISI Web of Science Cited Reference Search which produced a total of 817 citations. I also have an Erdös number of 4 (www.oakland.edu/enp, www.oakland.edu/enp/erdpaths.html).

97. Vernon C. Bleich, **John G. Kie,** Eric R. Loft, Thomas R. Stephenson, Michael W. Oehler, and Alvin L. Medina. 2005. Managing rangelands for wildlife. Pages 873-897 *In* Braun, Clait E., Ed. Techniques for Wildlife Investigations and Management, 6th ed. The Wildlife Society, Bethesda, Maryland.

96. Stewart, Kelley M., R. Terry Bowyer, Brian L. Dick, Bruce K. Johnson, and **John G. Kie.** 2005. Density-dependent effects on physical condition and reproduction in North American elk: an experimental test. Oecologia 143:85-93 (refereed journal).

95. **Kie, John G.**, Alan A. Ager, and R. Terry Bowyer. 2005. Landscape-level movements of North American elk (*Cervus elaphus*): effects of habitat patch structure and topography. Landscape Ecology 20:289-300 (refereed journal, invited paper for special issue).

94. Naylor, Leslie, and **John G. Kie**. 2004. Monitoring activity of Rocky Mountain elk using recording accelerometers. Wildlife Society Bulletin 32:1108-1113 (refereed journal).

93. Preisler, Haiganoush K., Alan A. Ager, Bruce K. Johnson, and **John G. Kie.** 2004. Modeling wildlife movements using stochastic differential equations. Environmetrics 15:643-657 (refereed journal).

92. **Kie, John G.**, Alan A. Ager, Norman J. Cimon, Michael J. Wisdom, Mary M. Roland, Priscilla K. Coe, Scott L. Findholt, and Martin Vavra. 2004. The Starkey Database: spatial-environmental relations of North American elk, mule deer, and cattle at the Starkey Experimental Forest and Range in northeastern Oregon. Transactions of the North American Wildlife and Natural Resources Conference 69:475-490 (invited paper).

91. Wisdom, Michael J., Bruce K. Johnson, Martin Vavra, Jennifer M. Boyd, Priscilla K. Coe, **John G. Kie**, Alan A. Ager, and Norman J. Cimon. 2004. Cattle and elk responses to intensive timber harvest. Transactions of the North American Wildlife and Natural Resources Conference 69: 727-758 (invited paper).

90. Vavra, Martin, Michael J. Wisdom, **John G. Kie,** John G. Cook, and Robert A. Riggs. 2004. The role of ungulate herbivory and management on ecosystem pattern and processes: future direction for the Starkey project. Transactions of the North American Wildlife and Natural Resources Conference 69: 785-797 (invited paper).

89. Alan A. Ager, Haiganoush K. Preisler, Bruce K. Johnson, and **John G. Kie**. 2004. Movements and habitat use of Rocky Mountain elk and mule deer. Transactions of the North American Wildlife and Natural Resources Conference 69:641-655 (invited paper).

88. Priscilla K. Coe, Bruce K. Johnson, Kelley M. Stewart, and **John G. Kie**. 2004. Spatial and temporal interactions of elk, mule deer, and cattle. Transactions of the North American Wildlife and Natural Resources Conference 69: 656-669 (invited paper).

87. Noyes, James H., Bruce K. Johnson, Brian L. Dick, and **John G. Kie**. 2004. Influence of age of males and nutritional condition on short- and long-term reproductive success of elk. Transactions of the North American Wildlife and Natural Resources Conference 69:572-585 (invited paper).

86. Findholt, Scott L., Bruce K. Johnson, Daalkhaijav Damiran, Tim DelCurto, and **John G. Kie**. 2004. Diet composition, dry matter intake, and diet overlap of mule deer, elk, and cattle. Transactions of the North American Wildlife and Natural Resources Conference 69: 670-686 (invited paper).

85. Bowyer, R. Terry, and **John G. Kie**. 2004. Effects of foraging activity on sexual segregation in mule deer. Journal of Mammalogy 85:498-504 (refereed journal).

84. Brillinger, David R., Haiganoush K. Preisler, Alan A. Ager, and **John G. Kie**. 2004. An exploratory data analysis (EDA) of the paths of moving animals. Journal of Statistical Planning and Inference 122:43-63 (refereed journal).

83. Bowyer, R. Terry, Victor Van Ballenburghe, and **John G. Kie**. 2003. Moose. Pages 931-964 *In*: G. A. Feldhamer, B. C. Thompson, and J. A. Chapman, editors. Wild mammals of North America: biology, management, and conservation, 2nd edition. The Johns Hopkins University Press, Baltimore, Maryland. (invited book chapter).

82. Richard J. Mackie, **John G. Kie**, David F. Pac, and Kenneth L. Hamlin. 2003. Mule deer. Pages 889-905 *In*: G. A. Feldhamer, B. C. Thompson, and J. A. Chapman, editors. Wild mammals of North America: biology, management, and conservation, 2nd edition. The Johns Hopkins University Press, Baltimore, Maryland. (invited book chapter).

81. **Kie, John G.,** R. Terry Bowyer, and Kelley M. Stewart. 2003. Ungulates in western forests: habitat requirements, population dynamics, and ecosystem processes. Pages 296-340 *In* C. J. Zabel and R. G. Anthony, editors. Mammal community dynamics: management and conservation in the coniferous forests of western North America. Cambridge University Press, Cambridge, United Kingdom (invited book chapter).

80. Ager, Alan A., Bruce K. Johnson, John W. Kern, and **John G. Kie**. 2003. Daily and seasonal movements and habitat use by female Rocky Mountain elk and mule deer. Journal of Mammalogy 84:1076-1088 (refereed journal).

79. Stewart, Kelly M., R. Terry Bowyer, **John G. Kie,** Brian L. Dick, and Merav Ben-David. 2003. Niche partitioning among elk, mule deer, and cattle: do stable isotopes reflect dietary niche? Ecoscience 10:297-302 (refereed journal).

78. Brillinger, David R., Haiganoush K. Preisler, Alan A. Ager, **John G. Kie**, and Brent S. Stewart. 2002. Employing stochastic differential equations to model wildlife motion. Bulletin of the Brazilian Mathematical Society 33:385-408 (refereed journal).

77. Noyes, James H., Bruce K. Johnson, Brian L. Dick, and **John G. Kie**. 2002. Effects of male age and female nutritional condition on elk reproduction. Journal of Wildlife Management 66:1301-1307 (refereed journal).

76. Bowyer, R. Terry, Kelley M. Stewart, Scott A. Wolfe, Gail M. Blundell, Karin L. Lehmkuhl, Phillip J. Joy, Thomas J. McDonough, and **John G. Kie**. 2002. Assessing sexual segregation in deer. Journal of Wildlife Management 66:536-544 (refereed journal).

75. Stewart, Kelley M., R. Terry Bowyer, **John G. Kie**, Norman J. Cimon, and Bruce K. Johnson. 2002. Temporospatial distributions of elk, mule deer, and cattle: resource partitioning and competitive displacement. Journal of Mammalogy 83:229-244 (refereed journal).

74. **Kie, John G.**, R. Terry Bowyer, Brian B. Boroski, Matthew C. Nicholson, and Eric R. Loft. 2002. Landscape heterogeneity at differing scales: effects on spatial distribution of mule deer. Ecology 83:530-544 (refereed journal).

73. Brillinger, David R., Haiganoush K. Preisler, Alan A. Ager, **John G. Kie,** and Brent S. Stewart, 2001. Modelling movements of free-ranging animals. University of California, Statistics Technical Report 610, Berkeley, California, 34pp. (www.stat.berkeley.edu/tech-reports).

72. Preisler, Haiganoush K., David R. Brillinger, Alan A. Ager, **John G. Kie**, and R. Patrick Akers. 2001. Stochastic differential equations: a tool for studying animal movement. Proceedings of the IUFRO 4.11 Conference, Session on Forest Biometry, Modelling, and Information Science, 26-29 June 2001, Greenwich, United Kingdom:1-9.

71. Leban, Frederick A., Michael J. Wisdom, Edward O. Garton, Bruce K. Johnson, and **John G. Kie**. 2001. Effect of sample size on the performance of resource selection analysis. Pages 291-307 *In* Joshua Millspaugh and John Marzluff, editors. Radio Tracking and Animal Populations. Academic Press, San Diego, California (invited book chapter).

70. Lehmkuhl, John F., **John G. Kie**, Louis C. Bender, Gregg Servheen, and Harvey Nyberg. 2001. Evaluating effects of ecosystem management alternatives on elk, mule deer, and white-tailed deer in the interior Columbia River basin, U.S.A. Forest Ecology and Management 153:89-104 (invited special feature, refereed journal).

69. **Kie, John G.,** and John F. Lehmkuhl. 2001. Herbivory by wild and domestic ungulates in the Intermountain West. Northwest Science 75 (special issue):55-61 (invited special feature, refereed journal).

68. Bowyer, R. Terry, Kelley M. Stewart, and **John G. Kie.** 2001. Fluctuating asymmetry in antlers of Alaskan moose: size matters. Journal of Mammalogy 82:824-824 (referred journal).

67. Brillinger, D. R., H. K. Preisler, A. A. Ager, and **J. G. Kie**. 2001. The use of potential functions in modelling animal movement. Pages 369-386 *In* A. K. Md. E. Saleh, editor. Data Analysis from Statistical Foundations. Nova Science Publishers, Inc., Huntington, New York (invited book chapter).

66. Coe, Priscilla K., Bruce K. Johnson, John W. Kern, Scott L. Findholt, **John G. Kie,** and Michael J. Wisdom. 2001. Responses of elk and mule deer to cattle in summer. Journal of Range Management 54:205 (abstract), A51-A76 (electronic copy, full text published online, http://uvalde.tamu.edu/jrm/remote/index.htm).

65. Johnson, Bruce K., John W. Kern, Michael J. Wisdom, Scott L. Findholt, and **John G. Kie**. 2000. Resource selection and spatial separation of mule deer and elk in spring. Journal of Wildlife Management 64:685-697 (refereed journal).

64. Rowland, Mary M., Michael J. Wisdom, Bruce K. Johnson, and **John G. Kie**. 2000. Elk distribution and modeling in relation to roads. Journal of Wildlife Management 64:672-684 (refereed journal).

63. Walburger, K., T. DelCurto, M. Vavra, L. Bryant, and **J. G. Kie**. 2000. Influence of a grazing system and aspect, north vs. south, on the nutritional quality of forages, and performance and distribution of cattle grazing forested rangelands. Proceedings of the Western Section of the American Society of Animal Science 51:181-184.

62. Stewart, Kelley M., R. Terry Bowyer, **John G. Kie,** and William C. Gasaway 2000. Antler size relative to body mass in moose: tradeoffs associated with reproduction. Alces 36:77-83 (refereed journal).

61. **Kie, John G**., and Brian Czech. 2000. Mule and black-tailed deer. Pages 629-657 *In* Stephen Demarais and Paul R. Krausman (editors), Ecology and Management of Large Mammals in North America. Prentice-Hall, Upper Saddle River, New Jersey. (invited book chapter).

60. Preisler, Haiganoush K., David R. Brillinger, Alan A. Ager, and **John G. Kie**. 1999. Analysis of animal movement using telemetry and GIS data. Proceedings of the American Statistical Association, Volume on Statistics of the Environment:100-105.

59. **Kie, John G.** 1999. Optimal foraging in a risky environment: life-history strategies for ungulates. Journal of Mammalogy 80:1114-1129 (invited special feature, refereed journal).

58. Bowyer, R. Terry, Victor Van Ballenberghe, **John G. Kie,** and Julie A. K. Maier. 1999. Birth-site selection by Alaskan moose: maternal strategies for coping with a risky environment. Journal of Mammalogy 80:1070-1083. (invited special feature, refereed journal).

57. Leslie, David M., Jr., R. Terry Bowyer, and **John G. Kie.** 1999. Special feature: life-history strategies of ungulates. Journal of Mammalogy 80:1067-1069 (invited special feature, refereed journal).

56. Boroski, Brian B., Reginald H. Barrett, and **John G. Kie**. 1999. Movement patterns and survivorship of deer migrating across a reservoir in northern California. California Fish and Game 85:63-69 (refereed journal).

55. **Kie, John G.**, and R. Terry Bowyer. 1999. Sexual segregation in white-tailed deer: density dependent changes in use of space, habitat selection, and dietary niche. Journal of Mammalogy 80:1004-1020 (refereed journal).

54. Rachlow, Janet L., **John G. Kie**, and Joel Berger. 1999. Territoriality and spatial patterns of white-rhinoceros in Matobo National Park, Zimbabwe. African Journal of Ecology 37:295-304 (refereed journal).

53. Bowyer, R. Terry, Victor Van Ballenberghe, and **John G. Kie**. 1998. Timing and synchrony of parturition in Alaskan moose: long-term versus proximal effects of climate. Journal of Mammalogy 79:1332-1344 (refereed journal).

52. Bowyer, R. Terry, **John G. Kie**, and Victor Van Ballenberghe. 1998. Habitat selection by neonatal black-tailed deer: climate, forage, or risk of predation? Journal of Mammalogy 79:415-425 (refereed journal).

51. Bowyer, R. Terry, Victor Van Ballenberghe, and **John G. Kie**. 1997. The role of moose in landscape processes: effects of biogeography, population dynamics, and predation. Pages 265-287 in John A. Bissonette, Ed. Wildlife and landscape ecology: effects of patterns and scale. Springer, New York. 410 pp.

50. Nicholson, Matthew C., R. Terry Bowyer, and **John G. Kie**. 1997. Habitat selection and survival of mule deer: tradeoffs associated with migration. Journal of Mammalogy 78:483-504 (refereed journal).

49. Lancia, Richard A., Clait E. Braun, Michael W. Collopy, Raymond D. Dueser, **John G. Kie**, Clifford J. Martinka, James D. Nichols, Thomas D. Nudds, Wayne R. Porath, and Nancy C. Tilghman. 1996. ARM! For the future: adaptive resource management in the wildlife profession. Wildlife Society Bulletin 24:436-442 (refereed journal).

48. Boroski, Brian B., Susan D. Draper, Reginald H. Barrett, and **John G. Kie**. 1996. Individual differences in detecting habitat elements in the California Wildlife Habitat Relationships System. Transactions of the Western Section of The Wildlife Society 32: 62-67 (refereed journal).

47. Boroski, Brian B., Reginald H. Barrett, Irene C. Timosi, and **John G. Kie**. 1996. Modelling habitat suitability for black-tailed deer (*Odocoileus hemionus columbianus*) in heterogeneous habitats. Forest Ecology and Management 88:157-165 (refereed journal).

46. **Kie, John G.** 1996. Optimal foraging in mule deer (*Odocoileus hemionus*): the role interspecific competition with domestic cattle. Forest Ecology and Management 88:131-138 (refereed journal).

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2. Patents - None

3. Documented, Archived Databases

An interagency research project on interactions among North American elk, mule deer, and cattle was initiated in the late 1980s at the Starkey Experimental Forest and Range in northeastern Oregon. As part of that project, an automated radio telemetry system was developed based on rebroadcast LORAN-C signals. LORAN is a marine radio-navigation system that was well-established prior to widespread use of Global Positioning Systems (GPS). The LORAN system is comprised of transmitting collars placed on individual animals, and a control-receiving subsystem. Every 20 seconds, a central computer pages one of the many collars deployed at any given time. As many as 150 animals have been included in the user-defined paging list simultaneously. The LORAN receiver in the collar responds by collecting raw LORAN data, which are then retransmitted via a VHF radio link to one of several relay towers located throughout Starkey Forest. The relay towers then retransmit the data back to the central computer, where the raw data are decoded and information on the animal's location is stored electronically for future analysis. The LORAN system has a mean locational accuracy of about 50 meters. Data collected from elk, mule deer, and cattle can be used to demonstrate animal distributions and interactions in real time. The Starkey database is publicly available and includes: locations of animals recorded between 1991-1996, metadata, electronic publications further explaining the system and the data collected, and relevant GIS layers such as habitat types, soils, a digital elevational model, and the forest road network. The database is available at www.fs.fed.us/pnw/starkey.

See publication 92; Kie, John G., Alan A. Ager, Norman J. Cimon, Michael J. Wisdom, Mary M. Roland, Priscilla K. Coe, Scott L. Findholt, and Martin Vavra. 2004. The Starkey Database: spatial-environmental relations of North American elk, mule deer, and cattle at the Starkey Experimental Forest and Range in northeastern Oregon. Transactions of the North American Wildlife and Natural Resources Conference 69:475-490.

4. Electronic and Audiovisual Outputs

1. I helped develop and produce Program CALHOME, a program for estimating animal home ranges (publication 44). CALHOME has been widely distributed nationally and internationally.

2. In early 1998, Dr. Enrique Flores from Peru asked about techniques for trapping deer and other mid-sized ungulates. Later in 1998, during a visit to the Netherlands, Dr. Sip Van Wieren from the Agricultural University at Wageningen asked me about techniques suitable for capturing roe deer near Zandvoort in the Netherlands. As a result of these and other requests from foreign scientists, I worked with a videographer to produce a short instructional videotape on the design, construction, and use of Clover-type deer traps. We produced this tape in both NTSC (American) and PAL (European) formats.

3. I assisted with the latest revision of the Home Range Tools (HRT) extension for ArcGIS software. The following was adapted from the abstract at: http://blue.lakeheadu.ca/hre/. HRT is an extension for ArcGIS that allows for analysis of home ranges of animals. The ability to use large data sets and carry out all required home range analyses within a single software environment were our primary reasons for developing the HRT for ArcGIS. The program has been written for novice GIS users who already understand basic wildlife telemetry issues and who are familiar with the concept of a "home range". Since HRT was originally developed for use with LOTEK GPS collars, they have a direct import filter for LOTEK GPS collar data files. The HRE also provides direct import of data from Service Argos DCLS files, dBASE files, or ASCII text files. An important feature is the Display Travel tool in HRT, which follows an animal's path as it moves from point to point. Point data can be used to calculate average distance moved between fixes, average elapsed time between fixes, speed of movement, total distance moved in a given period, or home range polygons. HRT includes 2 home range analysis models: minimum convex polygons (MCPs) and kernel methods. Because different computer software programs may produce large differences in home range estimates based on these models, HRT includes most of the options offered in earlier programs for calculation of estimators and values input for various parameters. There are several different ways to automatically generate %MCPs in HRT. HRT includes both fixed and adaptive kernel methods. Both Schoener's index and the Swihart and Slade index are calculated in conjunction with kernel analyses.

E. Other Significant Information

1. U.S. Forest Service Assignments

Acting Deputy Program Manager, Managing Natural Disturbances Program, U.S. Forest Service, Pacific Northwest Research Station, January-February 1998 and November-December 1998.

Acting Assistant Station Director for Research Programs in Southern California and Hawaii, U.S. Forest Service, Pacific Southwest Research Station, March-April 1986.

Committee of Scientists (a committee of Station Scientists advising the Station Leadership Team), U.S. Forest Service, Pacific Southwest Research Station, 1981-1983 and 1989-1990.

2. Recent Grants, External Funding, and Cooperative Research Agreements

Updates – Under construction.

Effects of Fuel Reduction Treatments on Rocky Mountain Elk; $280,538 from the Joint Fire Science Program (multiple federal agencies led by the Bureau of Land Management); Dr. John G. Kie, U.S. Forest Service, Pacific Northwest Research Station; Dr. Janet L. Rachlow, Department of Fish and Wildlife Resources, University of Idaho; and Dr. Martin Vavra, U.S. Forest Service, Pacific Northwest Research Station, Principal Investigators. This project is looking at the effects of fuel reduction treatments on elk at Starkey Experimental Forest and Range.

Statistical modeling of multidimensional movements of free-ranging animals; $241,000 from the National Science Foundation; Dr. David Brillinger, Principal Investigator, Chair Department of Statistics, University of California; Dr. Haiganoush Preisler, U.S. Forest Service, Pacific Southwest Research Station; Dr. John G. Kie, U.S. Forest Service, Pacific Northwest Research Station; and Dr. Brent Stewart, Hubbs-Sea World Research Institute collaborating. The project developed multidimensional movement models for recorded trajectories for both terrestrial and marine mammals.

3. Journal Editorships

Editorial Board, *Ecological Research – The Ecological Society of Japan*, 2007-present.

Associate Editor, *Journal of Mammalogy*, 2000-2003.

Co-Editor, *Alces 37(2) Special Issue*, David R. Klein Honorary Symposium: A Festschrift (a peer-reviewed publication), 2001.

Co-Editor, *Transactions of the Western Section of The Wildlife Society* (a peer-reviewed publication), 1992 -1993.

Editor-In-Chief, *Transactions of the Western Section of The Wildlife Society* (a peer-reviewed publication), 1986-1988.

4. Review of Journal Articles and Grant Proposals

I have served as a peer reviewer for a number of different national and international journals including Ecology, Conservation Biology, Journal of Wildlife Management, Wildlife Monographs, Wildlife Society Bulletin, Journal of Range Management, Journal of Mammalogy, and others. On average, I am asked to serve as a reviewer on about 8-10 manuscripts each year.

In addition, I have served as a reviewer for the following foreign journals: Acta Theriologica, Acta Zoologica Sinica, Canadian Journal of Zoology, Landscape Ecology, Ecological Modelling, Forest Ecology and Management, and others.

In April 1996, I served on the Rangeland Research Program Grant Proposal Review Panel, U.S. Department of Agriculture, Cooperative State Research, Education, and Extension Service.

I have also served on a review panel for the Research Council of Norway dealing with a research proposal titled “Spatial ecology of arctic and temperate ungulates.”

F. References

Available on request.