

Kenneth P. Burnham

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Statistician, and Senior Scientist
USGS, Biological Resources Discipline
Colorado Cooperative Fish and Wildlife Research Unit
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Colorado State University
Fort Collins, Colorado 80523

EDUCATION

Undergraduate: B.S., Portland State University, Biology, 1960-1966
Graduate: M.S., Oregon State University, Statistics, 1966-1969
Ph.D., Oregon State University, Statistics, 1969-1972

PREVIOUS POSITIONS

Laboratory Technician, Department of Microbiology, University of Oregon Medical School,
1963-1965 (Portland, Oregon).
Mathematical Statistician, Institute of Northern Forestry, U. S. Forest Service,
1972-1973 (Fairbanks, Alaska).
Statistician, Migratory Bird and Habitat Research Lab, U. S. Fish and Wildlife Service,
1973-1975 (Laurel, Maryland).
Biometrician, Western Energy and Land Use Team, U. S. Fish and Wildlife Service,
1975-1983 (Fort Collins, Colorado).
Area Statistician, USDA-Agricultural Research Service, South Atlantic Area, from August,
1983 until September, 1988 (Raleigh, North Carolina).

PRESENT POSITION

Assistant Unit Leader, Colorado Cooperative Fish and Wildlife Research Unit, (Fort Collins, CO) since October, 1988. The Units were under the U.S. Fish and Wildlife Service from their inception in 1935 until late 1993. November 13, 1993 the Units, hence my position, was transferred to the newly created National Biological Survey agency within USDI. Later, the name was changed to National Biological Service. The on October 13, 1996 all of NBS was eliminated as a free-standing agency by being merged with the US Geological Survey as a fourth division within USGS: then Biological Research Division (BRD); now called Biological Resources Discipline. August 8, 2004 I was promoted to Senior Scientist.

ACADEMIC APPOINTMENTS

Adjunct faculty, as assistant professor of statistics, University of Alaska (Fairbanks), 1972-1973 academic year.

Affiliate faculty, Department of Fisheries and Wildlife, Colorado State University, 1978-1982 academic years.

Associate Professor (USDA), Statistics Department, North Carolina State University, 1983-1988 academic years.

Faculty, Department of Fishery and Wildlife Biology, and affiliate faculty Department of Statistics, Colorado State University, since Fall 1988.

See my vitae information “*Academic*” for information on courses taught and students mentored.

AWARDS AND FELLOWSHIPS RECEIVED

See my vitae information “*Awards, honors and special activities.*”

PROFESSIONAL SOCIETIES

American Statistical Association (since 1967)

The International Biometric Society (since 1968)

Institute of Mathematical Statistics (since 1973)

The Wildlife Society (since 1978)

Ecological Society of America (1990-2001)

On the Editorial Board of the Ecological Society of America, Oct. 1, 1989 to Dec. 31, 1992; basically, this meant being an associate editor of the journals *Ecology* and *Ecological Monographs*, hence making the accept/reject decision on manuscripts assigned to me by the Managing Editor.

Associate Editor of *Biometrics* from May 1997 to Jan. 2000.

Elected to the Regional Committee of the Western North American Region (WNAR) of the International Biometric Society (IBS) for 2004-2006.

President-elect of WNAR for 2006.

President of WNAR in 2007.

Past-President of WNAR in 2008.

RESEARCH INTERESTS

Design of studies for sampling biological populations, especially for estimation of population abundance and population dynamics parameters.

Statistical inference methods for ecological, wildlife, and fisheries studies, and data-based modeling of biological processes, including model selection and assessing model selection uncertainty. Some specifics:

Dynamics of exploited populations, especially the question of additivity of exploitation and natural mortality.

The effect of heterogeneity in population dynamics (models), population sampling (i.e., size-biased sampling in ecology), and data analysis.

Theory and application of release-resampling (i.e., capture-recapture) studies.

Ecological experiments utilizing release-recapture methodologies.

Estimation of parameters from bird banding studies.

Theory and application of distance sampling (line and point transects) of wildlife and plant populations.

Closed-model capture-recapture theory.

Open-model capture-recapture theory.

Statistical design of environmental biotic studies.

Model selection in population parameter estimation, especially using AIC in capture-recapture.

Applied population sampling in natural resources based on finite population sampling theory.

Theory and application of information theoretic (e.g., AIC) model selection in general.

SEE ALSO

Publications

Awards, honors and special activities

Academic

Meetings