

ACADEMIC ACTIVITIES

I was on the Ph.D. committees of three (now graduated) students at North Carolina State University while there, 1983-1988. The material below is all for CSU.

Spring term 1989, co-taught (with Dr. David R. Anderson) FW 661, Design of Fish and Wildlife Studies. Two semester credits, letter grading, prerequisite of one statistics course, 300 level or higher. A nonmathematical introduction to the philosophy of science and statistical planning and conduct of research studies (e.g., sampling studies, controlled experiments, quasi-experiments, monitoring studies, observational studies). It did not deal with statistical analysis formulae (ANOVA) for analyzing data. Rather, this course emphasized issues of philosophy of science, valid study design, types of designs, and valid inference from studies.

On the M.S. committee of Ms. Cathy Brown (Dec. 1988 to April 1990). Cat finished and got her M.S. (in the CSU FWB Department) at the end of April 1990.

On the M.S. committee of Mr. Rob Bennetts (Nov. 1988 to Aug. 1991). Rob finished (in the CSU FWB Department) and went on to the University of Florida, Gainesville to do a Ph.D. on snail kites (an endangered species) as a Coop. Unit student there (funding joint from FWS and NPS).

On the M.S. committee of Ms. Marilet Zablan (May 1989 to October 1993; CSU FWB Department). Marilet took a job with the U.S. fish and Wildlife Service in Salt Lake City, Utah, before finishing, but she did eventually finish (in late October, 1993), at which time she was still employed by USFWS in Utah.

Spring term 1990, co-taught (with Drs. David Anderson and Gary White) FW663, Sampling and Analysis of Vertebrate Populations. Five credit hours - a very intense course on CR, LT CIR CPUE, many programs use (a lot of lab work): SAS, DERIVE, CAPTURE, RELEASE, ESTIMATE, BROWNIE, JOLLY, JOLLYAGE, SURVIV, TRANSECT. The hardest course taught in FWB. Quite quantitative. I spent a lot of time on it.

On the M.S. committee of Mr. Kevin Robinette (May 1990 to March 1992; CSU FWB Department). Kevin took a job with the Utah Division of Wildlife.

Major professor for Mr. Tom Stanley, Ph.D. student in FWB Dept. (Aug. 1990 to July 1997). Tom had his dissertation defense on July 1, 1997 and turned in his dissertation 10 days later. The title of his dissertation is "*Model selection for closed-population capture-recapture studies.*" During and after his studies Tom was employed full time at the USGS-BRD Mid-continental Ecosystem Science Center (MESCC) in Fort Collins.

Fall term 1990, taught FW551, Design of Fish and Wildlife Studies (same course as FW661, but I changed it to a 500 level course number). Two semester credits, letter grading, prerequisite of one statistics course, 300 level or higher. A nonmathematical introduction to the philosophy of science and statistical planning and conduct of research studies (e.g., sampling studies, controlled experiments, quasi-experiments, monitoring studies, observational studies). It did not deal with statistical analysis formulae (ANOVA) for analyzing data. Rather, this course emphasized issues of philosophy of science, valid study design, types of designs, and valid inference from studies. Also, 3 students took it for 3 hours, the added 1 hour of credit was on quantitative issues like sample size determination.

On the M.S. committee of Mr. Mark Watowa (Sept. 1990 to October 1993). Mark finished and got his M.S. degree (CSU FWB Department) and then was employed by NREL, CSU.

On the Ph.D. committee of Ms. Tanya Shenk (June 1991 to Dec. 1996; CSU FWB Department). Tanya had a draft of her dissertation in July 1995 and took a job with CDOW in Sept. 95. Tanya defended her Ph.D. dissertation November 22, 1996 and passed; she turned in her dissertation in the spring of 1997; title: "*Detecting density dependence in natural populations.*"

Major professor for Ms. Gail Olson, Ph.D. student in CSU FWB Department (Aug. 1991 to April 1999). Her dissertation title: "*Population dynamics of Townsend's ground squirrels in southwestern Idaho.*" Prior to her defense Gail did some teaching (hence was not full time working on the dissertation); in particular, Gail was at Humboldt State University Fall 1997-Spring 1998 teaching a full load of undergraduate courses in the wildlife department. In August 1999, Gail entered a Post Doc position (re Northern Spotted Owls) with the Oregon Coop Unit (OSU, Corvallis, OR)

Joined, as faculty member, the CSU Program for Ecological Studies (PES), September 1991 (an interdisciplinary graduate school program at CSU, which became GDPE in 1994).

On the Ph.D. committee of Mr. Peter Sharpe (November 1991 to November 1998; CSU Biology Department). Peter's dissertation title: "*Behavioral ecology of Townsend's ground squirrels (*Spermophilus townsendii*) in a heterogeneous environment.*" In 1997 Peter started working for the Institute for Wildlife Studies (main office in Arcata, CA), stationed on Santa Catalina Island (CA). It was his job to run the bald eagle reintroduction and monitoring program on the island, which includes manipulations of eggs (replacing them with artificial eggs), fostering chicks into the nests, and hacking eaglets using hack towers. The reason for doing this is the high levels of DDE contamination in the Southern California Bight.

On the M.S. committee of Mr. Larry Hilaire (Dec. 1991 to July 1994; CSU FWB Department). His thesis title: "*Evaluation of home study versus teacher-taught hunter education: enhancement of learning.*" At the time he completed his M.S. Larry was in line for a job with the New Mexico F&G Department.

On the Ph.D. committee of Mr. Alan Franklin (Feb. 1992 to November 1997; CSU FWB Department). His dissertation title: "*Factors affecting temporal and spatial variation in northern spotted owl populations in northwest California.*" Alan then continued to work on northern spotted owl research via Humboldt State University (soft money), and to help, in the short term, on a Unit RWO project on survival trends of waterfowl 1950s to mid 1990s.

Feb. 1992, FW551 was approved, by PES as a satellite course in PES (Program in Ecological Studies) at CSU. In 1994 PES became a graduate degree-granting program (M.S. and Ph.D.) at CSU, and changed its name to the Graduate Degree Program in Ecology.

On the M.S. committee of Ms. Bonnie Ruefenacht (March 1992 to May 1993; CSU FWB Department). Bonnie completed her M.S. in Wildlife and stayed on at CSU as a Ph.D. student.

On the Ph.D. committee of Mr. Pat Ward (May 1992 to Oct. 2001); Pat was a student in the Biology Department, advisor was Bea van Horne. Pat was funded by the U.S. Forest Service, Rocky Mountain Research Station. His Ph.D. research was about Mexican spotted owls; dissertation title: "*Ecological responses by Mexican spotted owls to environmental variation in the Sacramento Mountains, New Mexico.*" Pat had a short Post Doc lined up (same USFS funding source) to allow getting publications out from his dissertation, and will be looking for a job.

On the M.S., committee of Ms. Tami Holmes (May 1992 to Feb. 1994; CSU FWB Department). Tami completed her M.S. in wildlife, then took some time off to relax (while working temporarily at MESC, Fort Collins).

Fall semester, 1992, I taught FW551 again, by myself: Design of Fish and Wildlife Studies. Essentially the same course as in fall 1990, updated some. Given again for 2 or 3 credits, everyone enrolled takes the 2 hour part; this year I had 37 students for a grade (plus 2 students auditing) and 10 of them took the extra hour where we dealt with some analysis issues and technical aspects of computing power.

Fall semester, 1993, co-taught (with Gary White) an informal graduate seminar on finite sampling theory based sampling in wildlife and natural resources in general (much of such sampling is of people, such as hunters to determine their success, opinions and attitudes). (effort equivalent to 1 credit hour for the students; 2 of them took it for credit).

On the Ph.D. committee of Mr. Gerardo H. Terrazas-Gonzalez, as co-adviser with Dave Bowden; Gerardo was a student in the Statistics Department, supported by NWI project funds via a RWO through the Coop Unit (Jan. 1994 to April 1997). The title of his dissertation: "*Evaluation of projection methods to predict wetlands areas: the wetlands inventory of the USA.*" Gerardo returned to Mexico; he had a job interview there in late April.

On the Ph.D. committee of Ms. Char-Ngan Wong, a Ph.D. student in the Statistics Department (advisor: Dave Bowden) from January 1994 to June 1996. Char-Ngan's dissertation title: "*Population size estimation using the modified Horvitz-Thompson estimator.*" The work related to aerial surveys of wildlife to estimate population size. Char-Ngan got a job (in research), in Chicago, with a pharmaceutical firm.

On the M.S. committee of Ms. Renata Riffe from Jan. 1994 to May 1994. She is a student in the Statistics Department, advisor is David Bowden. Renata did all her course work in 1987 to 1990 then returned to her Alaska Fish and Game job without a degree. In Spring 1994 she returned to CSU and completed a project for a Plan B M.S. Her project was a mark-recapture study on round whitefish; the title of the project: "Abundance, length and age composition of Chatanika River round whitefish, 1991."

Major professor for Ms. Sara Oyler-McCance, Ph.D. student in the CSU FWB Department (Aug. 1994 to May 1999). Her dissertation title: "*Genetic and habitat factors underlying conservation strategies for Gunnison sage grouse.*" Sara was supported by CDOW. After finishing she took a job with MESC (hence USGS-BRD), stationed in Dr. Tom Quinn's molecular genetics lab at (DU, Denver) to provide a genetics analysis capability within MESC. The position initially will be like a Post-Doc.

On the M.S., committee of Ms. Ann Davidson (Dec. 1994 to Dec. 1998; FWB Department). Her thesis: "*Avian nest success and community composition in cottonwood forest patches on the Yampa river, Colorado.*" Ms. Davidson took a job with The Nature Conservancy as the land steward of properties of TNC on the Yampa river near Hayden, Colorado (the area of her research project).

Fall semester, 1994, I taught FW551 again, by myself: Design of Fish and Wildlife Studies. Essentially the same course as in fall 1990, and 92, updated some. Given again for 2 or 3 credits, everyone enrolled takes the 2 hour part; this year I had 17 students for a grade (plus 1 student auditing), only 4 students took the extra hour where we dealt with some analysis issues and technical aspects of computing power.

On the M.S. committee of Ms. Sandra Thompson, a student in the Statistics Department (May 1994 to May 1996). Her M.S. thesis dealt with analysis of some data on bowhead whales: (1) evaluation of uncertainty in the historic landings data from 1848 to 1914 (and beyond), and (2) problems in, models for, and data analysis of mass-length-girth data on bowheads. After finishing, she took a summer internship with CDC in Atlanta, GA, then returned to CSU in the Fall of 1997 for a Ph.D. in statistics.

On the Ph.D. committee of Ms. Molly Van Caster (April, 1995 to November 1999), a student of (co-advisors) Jennifer Hoeting and Dave Bowden, Statistics Department (in 1998 Molly married and changed her name to Leecaster). Molly's dissertation: "*The autologistic model with covariates for sample data and robust sampling designs using predicted probability of presence.*" The project was funded by the US Forest Service national inventory and monitoring program located in Fort Collins. Molly got a job in California with the Southern California Coastal Water Research Project.

On the Ph.D. committee of Ms. Mary Conner (Dec. 1995 to June 1999) a FWB Department student, advisor was Gary White. She was supported by the CDOW on a project dealing with some aspects of early archery season effects on the White River elk herd, in the general vicinity of Meeker, CO. The title of her dissertation: "*Elk movement in response to early-season hunting in the White river area, Colorado.*" Mary was then employed by CDOW to work on aspects of chronic wasting disease.

On the M.S. committee of Ms. Mylea Petersburg (Jan. 1996 to Nov. 1997; CSU FWB Department), a student of Bill Alldredge (FWB Dept.). Her thesis title: "*Emigration, fidelity, distribution and survival of elk on a northwestern Colorado winter range.*" She was supported by the CDOW, and other sources such as the Rocky Mountain Elk Foundation, on a project dealing with dispersal and movement of elk, especially 2 year old bulls, in game manage unit 10 (which is north of Meeker, CO to the Yampa river and west to the UT border); winter elk use of Dinosaur National Park was also an issue.

Major Professor for Mr. Craig McCarty, a Ph.D. student in GDPE (April 1996 to November 1999). This arrangement was reached after Craig already had two years of his program but under the Department of Clinic Sciences, College of Veterinary Medicine and Biomedical Sciences. He switched to GDPE and me, but on the same dissertation topic. Craig was funded by the CDOW. Craig has an M.S. in Wildlife science from CSU; his Ph.D. work was on epidemic modeling of infectious diseases with emphasis on applicability to free ranging wildlife populations.; dissertation title: "*Contributions to the mathematical theory of epidemic dynamics.*" Dr. McCarty then started in medical school at St. George's University, Grenada (so he can eventually work in human epidemiology research).

On the M.S. committee of Ms. Cristi Yoder, a student in the FWB Department (Jan. 1996 to July 2000). Cristi was supported by the National Wildlife Research Center (USDA-APHIS), from bird damage control project monies; she worked on an immuno-contraception project. Her thesis: "*Development and comparison of immuno-contraceptive techniques and a competitive cholesterol inhibition technique for control of avian reproduction.*" In fall 1999 Cristi started a Ph.D. at CSU in Physiology (before even completing the M.S. thesis; she did complete the M.S. degree).

On the Ph.D. committee of Mr. Robert Schooley (May 1996 to June 2002); Bob is a student in the Biology Department, advisor is John Wiens. The title of Bob's dissertation: "*Spatial ecology of cactus bugs: interactions among suitable habitat, connectivity, and movements.*" Bob took a 2 year Post-Doc out of FSU in Gainesville, FL, dealing with muskrats and spatially explicit models.

Fall semester, 1996, I taught FW551 again, by myself: Design of Fish and Wildlife Studies. Given again for 2 or 3 credits. This year I had 8 students for a grade (plus 2 visiting faculty sitting in and 2 students auditing), only 2 students took the extra hour.

On the M.S. committee of Mr. Aaron Schwartz (July 1998 to November 2002); Aaron was a student in the FWB Department. He was funded by the National Wildlife Research Center (USDA-APHIS). His thesis title: "*Surgical sterilization of the black-tailed prairie dog (Cynomys ludovicianus): A model for effects of reproductive inhibition and hormonal reduction in the male.*" At the time of his thesis defense he was working for a private environmental consulting firm in Denver.

Fall semester, 1998, I taught FW551 again, by myself: Design of Fish and Wildlife Studies. Given again for 2 or 3 credits. This year I had 20 students for a grade; only 3 students took the extra hour. This year I got key aspects of all lectures typed into the EXP word processor files.

On the M.S. committee of Ms. Rinda E. Tisdale-Hein (Jan. 1999 to March 2001); a student in the FWB Department, advisor is Rick Knight. Rinda was and is working for the Bureau of Reclamation on a project about brown headed cow birds, but motivated by issues related to the endangered willow flycatcher. Thesis title: "*Densities of brown-headed cowbirds on grazed and ungrazed riparian and rangeland areas along the middle Rio Grande, New Mexico.*"

On the Ph.D. committee of Steve Dinsmore (Jan. 1999 to Sept. 2001). Steve was a student in the FWB Department (advisor, Gary White). His program was mostly Federally supported, mostly by the USFWS. His research subject was Mountain Plovers; dissertation title: "*Population biology of mountain plovers in southern Phillips county, Montana.*" Steve took a university tenure track position (1 Oct., 2001, avian population ecologist) at Mississippi State University in the Department of Wildlife and Fisheries.

On the Ph.D. committee of Ms. Arriane Brand (May 1999 to March 2004). Arriane was a student in GDPE with the FWB Department as her home base. Her project was funded by several government agencies (esp. BLM and FSFS); her advisor was Barry Noon. Arriane's research subject was edge effects and land use pattern effects on nesting birds, with a study area in the San Pedro river raparian system in Arizona, near the Mexican border. Arriane's dissertation title: "*Prediction and assessment of edge response and abundance for desert raparian birds in Southeastern Arizona.*" She took a Post-Doc. as soon as she finished her Ph.D.

Co-advisor (Advisor, David Anderson) of M.S. student Mr. Paul Lukacs (June 1999 to Sept. 2001), a Unit & FWB Department wildlife student. The title of Paul's thesis: "*Estimating density of animal populations using trapping webs: Evaluation of web design and data analysis.*" Paul stayed at CSU for a Ph.D.

Late Fall, 1999 to May 2000 I served on the selection committee, Department of Statistics, for two positions in that department. The first position was at the starting level, Assistant Professor. The second position was a senior-level, full professor position.

On the M.S. committee of FWB Department student Mr. Matthew Farnsworth (Jan. 2000 to November 2001); Matt was a student of Barry Noon. The title of Matt's thesis: "*Modeling the influence of habitat variation and spatial autocorrelation on southwest willow flycatcher nesting density.*" Matt stayed on at CSU for a Ph.D.

Fall semester, 2000, I taught FW551 again, by myself: Design of Fish and Wildlife Studies. It was again given for 2 or 3 credits. This year I had 15 students in the class for a grade, 3 students took the extra hour (hence 12 for 2 credits).

On the M.S. committee of FWB Department student Ms. Ayeisha A. Brinson (Jan. 2001 to October 2002). Her thesis title: "*Attitudes and perceptions of National Wildlife Refuge managers and biologists.*" Ayeisha was a student of Del Bensen; her interests are in human dimensions. She was also a SCEP with MESC (under Lee Lamb). She was initially accepted by Mallory McDuff but Del took her after McDuff left FWB. Ayeisha's tentative plan as she finished her M.S. was to go to University of Miami into a Ph.D. program.

On the Ph.D. committee of GDPE (via Biology Dept.) student Ms. Shelley Bayard de Volo (Feb. 2001 to May 2008). Shelley's advisor is Mike Antolin; her project is about DNA- based individual bird identification, motivated originally by DNA capture-recapture issues for Goshawks. Much of the funding was from the long-term U.S. Forest Service Goshawk project on the Kabab plateau; Richard Reynolds is the P.I. of that project. He is also on Shelley's committee. Her dissertation is "Genetic studies of Northern Goshawks (*Accipiter gentilis*): Genetic tagging and individual identification from feathers, and determining phylogeography, gene flow and population history for goshawks in North America." Shelley will stay in Fort Collins, funded by USFS and continue to work in Mike Antolin's lab on USFS projects (sort of a Post-Doc).

On the Ph.D. committee of Mr. Devin Johnson (June 2001 to August 2003), a student in Statistics (B.S. in wildlife from U. of AK, M.S. in statistics here); his advisor is Jennifer Hoeting. The title of Devin's Ph.D. dissertation: "*Bayesian analysis of state-space models for discrete compositions.*" His work allows for multiple sites and compositions with multi-way classifications, all under generalized random effects models. Devin got a tenure track position with the University of Alaska at Fairbanks (Dept. of Mathematical Sciences), starting in September 2002; he wants to get a joint appointment with the Institute of Arctic Biology and do applied statistics work with biologists and wildlife faculty.

Major professor for Paul Lukacs, Ph.D. student in the CSU FWB Department (Aug. 2001 through February 2005). This project was funded from base CDOW money plus some add-on dollars for lab work and travel, and is tied to the Lynx project of Tanya Shenk. Paul worked in the general area of DNA-CR. His dissertation title: *Statistical aspects of using genetic markers for individual identification in capture-recapture studies.* In March 2005 Paul went to work full time in Fort Collins for Johnson Controls Inc. (under a contract with Patuxent Wildlife Research Center [monitoring program]) doing contract work for the National Park Service's National Inventory and Monitoring Program, which has its headquarters in Fort Collins.

Fall 2001 I taught FW696 (graduate group study) on the principles of probability sampling with emphasis on applications to natural resources and ecology. This was a 1 hour course; 19 students completed it.

Fall semester, 2002, I taught FW551 again, by myself: Design of Fish and Wildlife Studies. It was again given for 2 or 3 credits. This year I had 15 students in the class for a grade, 4 students took the extra hour (hence 11 for 2 credits).

Fall semester, 2002, I also taught a seminar section in EY592 (cross-listed as FW592) on Philosophy of science for ecology. We read and discussed material on this subject. It was 1 credit hour as pass/fail. Fifteen graduate students took it.

Spring semester, 2004, co-taught FW663 (Sampling Biological Populations; actually it is on marked animal data and distance sampling) with Gary White. We had 19 students that took it for credit (5 hours). Also, Dr. David Thomson sat in as he was here on study leave from the Netherlands Institute of Ecology. This teaching was a huge effort, 30+ hours of work per week from January 21st to April 2, plus grading the final exam on the weekend of April 3-4.

On the Ph.D. committee of Paul Conn (May 2004 to April 2007), FWCB student (advisor, Gary White). Paul has an M.S. in biomathematics from NCSU (under Ken Pollock). Paul's project was on aspects of capture-recapture. The title of his Ph.D. dissertation is "Bayesian analysis of age-at-harvest data with focus on wildlife monitoring programs." Paul started here Fall 2003 taking classes. He got PRIMES funding for Fall/Spring 2004/2005. Funding after then was from CDOW. Paul finished in April, 2007, at which time he had a Post Doc position with Evan Cooch at Cornell University.

Fall semester, 2004, I taught FW551: Design of Fish and Wildlife Studies (my title for it is just Principles of Study Design) as a 2 credit hours course. This year I had 5 students in the class (FWB had only 6 incoming new graduate students).

On the Ph.D. committee of Mr. Brett McClintock (May 2005 to April 2008), FWB student (advisor Gary White). Brett has PRIMES funding. Brett's project is on extensions of NOREMARK ideas for closed population estimation under heterogeneity. The title of his dissertation is *Generalized mixed effects models for estimating demographic parameters with mark-resight data*. Brett took and passed his Ph.D. dissertation defense on March 12, 2008.

Spring semester, 2006 (Jan. 19 to March 31), co-taught FW663 (Sampling Biological Populations; actually it is on marked animal data and distance sampling) with Gary White, and teaching assistant Paul Conn. We had 10 students that took it for credit (5 hours). This teaching was a huge effort, 30+ hours of work per week from January 18th to March 31st, plus grading the final exam after 31 March.

On the M.S. committee of Joshua Dooley (September 2006 to mid 2008). Paul Doherty is his advisor. Josh has worked for CDOW and his funding comes from CDOW. His project and thesis title is *Mallard response to experiment human disturbance and non-breeding survival along the South Platte River in Colorado*. Josh took and passed his M.S. qualifying oral exam on 25 May, 2007. He finished all field work by the end of February, 2008. He defended his M.S. thesis on October 30, 2008; he passed with distinction.

Fall semester, 2006 (August 21 to Dec. 15), I taught FW551: Design of Fish and Wildlife Studies (my title for it is just Principles of Scientific Study Design). This year it changed (for me) to a 3 credit hour course (had been 2 credits). I had 7 students complete the class.

Mid-August to mid-October 2007, I served on the FWCB Departmental search committee for a Population Quantitative Ecologist (Gary White's replacement). I had to look in some depth at the 59 applications. All together this was at least 40 hours of work.

On the M.S. committee of Ms. Amy Davis (September 2007 to May 2008); her advisor is Phil Chapman (Statistics Dept.). She is a statistics student, with a B.S. in biology. Her project is about analysis of a large set of bird point transect data (program DISTANCE is being used) taken by the Rocky Mountain Bird Observatory over the past 10 years. She helped collect some of it (Amy is a “birder”). Much of the funding for those studies has come from the CDOW, so CDOW has an interest in the results. Her committee only deals with the M.S. project (not her coursework program). Amy is doing a plan B (non-thesis) M.S. Amy defended, and passed, April 11, 2008. Her project report title is “Trend evaluation of the Rocky Mountain Bird Observatory’s Colorado breeding bird data, 1998-2007.”

Fall 2008. I taught (9th time) a 3-credit graduate course this fall semester, starting August 26th: FW551 Design of Fish and Wildlife Studies (my title for it is Principles of Scientific Study Design). Seven students completed the class; lectures ended Dec. 11th. The final was turned in to me Dec. 18th. Grades were posted Dec. 22nd, 2008.