Chair’s Message:

Greetings from the Department of Animal Science. Since the fall 1999 issue of Highlights, we have updated our mailing list and added a number of alumni, friends and recent graduates. If this issue of Highlights is your first, we hope that you enjoy receiving news of your department. As you can see, we survived Y2K with the rest of world, and we eagerly look forward to what the new century will bring. In this issue you will read about several new campaigns that we hope will receive your support. After serving for decades our teaching, research and outreach programs to California agriculture, our feedmill and our dairy facility are in need of replacement to meet the challenges of the new century. Both of these facilities must be upgraded to address issues new to the state since the current facilities were built. We also have started planning for an all-weather pavilion for teaching and extracurricular activities using animals.

Our dairy and livestock show teams, which have been reinvigorated in recent years, are soliciting support to purchase a trailer for safe and dependable transport of their animals to local shows. With several pledges in hand, our show teams look forward to planning their arrivals in the daytime, not in the dead of night to avoid having others see their decrepit trailer.

Another exciting new project is the Educational Enhancement Fund created by a donation from Bob and Dorothy Laben to help students with travel expenses to distant internships and meetings for professional development. Dr. Laben was Master Advisor for the Animal Science major for many of my early years as a faculty member at UC Davis, and his dedication to students is remembered fondly by many Animal Science alumni.

In this issue you will read about some long-term departmental members to whom we bid hasta luego as they retire or accept new challenges elsewhere as well as about some new members we welcome to the Animal Science family. You will read about the achievements of Animal Science faculty, staff and students, about new programs to serve the public through companion animals and about new approaches toward serving California animal agriculture. Highlights is our way of staying in touch with you; we hope that you will contact us if you want more information on something you read, or tell us if we can assist you in any way.

Best wishes for a healthful and productive 2000.
Labens Fund Undergraduate Educational Enhancement Fund

Bob and Dorothy Laben present the Robert and Robert and Dorothy Laben Scholarship to Eleanor Mangosing at the 1999 Annual Spring Awards Barbecue.

Emeritus Professor Bob Laben and his wife Dorothy have contributed $10,000 to the department to establish an undergraduate educational enhancement fund. Income from the fund will be used to help students participate in internships, special meetings, programs or activities supplemental to their regular academic program.

This endowment is a clear departure from endowed scholarship funds. By rule, students must have a 3.25 grade point average to be eligible for a scholarship. The Undergraduate Educational Enhancement Fund proceeds will be available to all Animal Science students in good standing.

"We're just concerned that good kids are missing out on opportunities for personal growth because they are short on resources. We'd hate to see a student miss an internship or employment because he or she could not afford to attend a meeting or make it to a job interview," Laben said.

The awards are to support activities supplemental to the student's regular academic program. Since they are not intended to meet basic educational expenses, a recipient's financial aid award package will not be affected.

The Labens hope others will join them by contributing to the endowment. Checks should be made payable to the "UC Regents." The return envelope enclosed in this issue of Highlights can be used to mail donations to the department.

"We realize that $10,000 will not earn sufficient income to fund the number of students we want to benefit. We think the proposal is a worthy one and hope many who learn of it will be challenged to help build this fund," Laben said.

Animal Science Faculty Are Leaders in Establishing Quality Assurance Programs

By the late 1980s a simple word, "quality," had begun to affect food consumption patterns. Consumers were demanding safe, wholesome products of consistent quality. The California meat and egg production sectors recognized that future growth of their industries depended on meeting these requirements. They also realized that any quality assurance program would have to originate from within the industry. A set of self-imposed standards was required as well as a program to monitor compliance to these standards. Further, the development of an effective quality assurance program would depend on cooperation between industry, government agencies and UC Cooperative Extension.

Extension specialists in the department have taken lead roles in developing quality assurance programs in the beef, table egg and broiler industries. Development of the Beef Quality Assurance Program got under way in the early 90s. Dr. Jim Oltjen, Animal Science Extension Specialist, and Dr. Ben Norman, Extension Specialist in the School of Veterinary Medicine, retired, provided early leadership. Their role centered on the development of a program curriculum and delivery of the program to the industry. Educational and training materials were developed under Dr. Oltjen's direction. Mary Biesiadecki (BS, 1990; MAM, 1995) developed a survey to monitor the effectiveness of program delivery as part of her graduate work in the Master of Agriculture and Management degree program.

The initial Quality Certification Program promoted good beef feedlot management practices. Subsequently the Cow-Calf Quality Assurance Program was developed to ensure quality and consistency of beef at the most fundamental level. Today the California program is recognized as one of the leading beef quality assurance programs in the U.S. The program is currently co-chaired by Dr. Oltjen and Dr. John Maas, Extension Specialist in the School of Veterinary Medicine.

Dr. Ralph Ernst, an Extension Poultry Specialist in the department, has undertaken a similar educational role in the California Egg Quality Assurance Program. Dr. Ernst, chairman of the Education Committee, is largely responsible for developing and implementing training programs, with all members of the poultry extension group contributing. The educational component of the plan requires egg producers to complete 16 hours of training for certification. Dr. Ernst has been "particularly gratified at the level of industry participation" for a voluntary program. He is also quick to point out that the program has been a team effort including major input by the California Department of Food and Agriculture, the USDA, the California Department of Public Health and the table egg industry.

A companion program has been developed for California Poultry meat producers in cooperation with the California Poultry Industry Federation and the California Squab Producers Cooperative. John Voris, Extension Poultry Specialist on recall from retirement, has taken leadership in this education program.
Numerous New Grants Received by Animal Science Faculty

Bernie May received a USDA Small Business Innovation Research program grant in conjunction with Clear Springs Foods, Inc., of Buhl, Idaho, for $225,000 to find molecular markers linked to quantitative trait loci conferring resistance to IHN virus in rainbow trout. He and Graham Gall received $90,000 from the California Department of Fish and Game to continue their efforts on the conservation of golden trout. Both grants run from September 1999 to August 2002.

Mary Delany recently received a two-year grant, a USDA National Research Initiative (NRI), for $160,000 to study avian telomere organization and telomerase genes.

Trish Berger received $210,000, also from USDA-NRI, for 1999 to 2001 so that she and her co-investigator, Anita Oberbauer, can study molecules on the oocyte plasma membrane that bind sperm during fertilization.

Dennis Hedgecock received a USDA-NRI grant for $220,000 to make a moderately dense linkage map of the Pacific oyster genome. Fourth-year funding was approved by the USDA Western Regional Aquaculture Center for a regional project that he chairs, titled “Improving Pacific oyster broodstocks.” In addition, the US Fish & Wildlife Service awarded him a $200,000 contract to study genetic maintenance of hatchery and natural origin winter-run chinook salmon.

Jim Millam was awarded a three-year grant of $172,000 from the USDA-NRI to study the physiological mechanism of how prolonged exposure to long-day-lengths limits egg production in turkey breeder hens.

Jim Millam and Joy Mench received $25,588 for the year 2000 from the Kenneth A. Scott Charitable Trust for a project entitled “Improving the welfare of companion parrots: reduction and prevention of abnormal behaviors.”

Francine Bradley has had two grants renewed, one with Joy Mench and Pat Wakenell for $170,000, a National Research Initiative, to study behavioral activity in broiler chickens and its effects on the incidence of skeletal problems, and another from a Community Development Block Grant to study the feasibility of emu production support facilities in El Dorado County. Another small grant, for $1038, will fund development of a peafowl trapping and relocation plan in Rolling Hills Neighborhood Park, City of Fairfield.

Peter Robinson’s and Ed DePeters’ gift from the Supima Association of America, October 1999 to April 2000, will permit them to study the nutrient profile of Pima cottonseed and to determine the effect of storage on the feeding value of processed Pima cottonseed for dairy cattle.

Kirk Klasing received a University of California BioSTAR Award for research to be conducted with Applied Phytagologics on the use of recombinant human antibacterial proteins as growth promotants in chickens. The $70,293 grant will cover this year and next.

Barry Wilson was recently named Co-Principal Investigator with Frank Zalom, Integrated Pest Management Director, and David Hinton of Environmental Toxicology on a three-year CALFED grant of approximately $861,000. Their objectives are to evaluate and help reduce pesticide runoff during dormant spraying of fruit orchards and to identify alternatives to using organophosphate pesticides (OP) on orchard crops while also identifying situations when OP can be used without threatening the environment. Wilson is also working on a pamphlet on the “ABCs” of Toxicology for growers and children.

The State Water Resources Control Board, California Department of Food and Agriculture and University of California Cooperative Extension received a grant of $443,470 from U.S. EPA to fund an environmental stewardship certification evaluation process for the first 900 to 1,000 dairy operators who sign up. Producers attend the Environmental Stewardship Short Course, develop an environmental stewardship farm management plan and complete a non-regulatory third-party evaluation. Drs. Mike Payne of Environmental Toxicology and Deanne Meyer of Animal Science will oversee the university’s participation in this project.

Jan Roser received a one-year grant last June from the UC Davis Center for Equine Health (CEH) to study changing the testicular estrogen/testosterone ratio: effects on testicular function in the stallion. The $34,430 for this grant comes from the California racing industry, funded by the 0.1% of all pari-mutuel betting that goes to the CEH for research.

Jim Oltjen and John Maas received a $20,000 grant for the year 2000 from the California Beef Council to develop an Advanced Residue Avoidance Module for the California Cattlemen's Association Quality Assurance Program. Over 4,000 beef cattle producers in California have been certified in the basic program, and this new module will extend their training in recognizing and avoiding potential hazards to food safety and provide professional continuing education.

Jim Oltjen and Dan Sehner are technical advisors to the California Beef Cattle Improvement Association, which received $7,000 to conduct a producer course “Your Beef’s at Stake” in cooperation with California Polytechnic University, Pomona, in 2000. The two-day course provides participants the tools to get to know their cattle from the point of view of carcass and beef quality.

Animal Science Web Site

Check out our Web site: http://animalscience.ucdavis.edu/ where you can read past issues of Highlights, tour our facilities, see what classes are offered, and find out about our faculty and staff. At the bottom of the list of available highlight issues, you can even reach a handy form in case you'd like to make a donation to support some general or specific aspect of our program.

Do you know any alumni or other friends of the department who don't receive this publication? We'd be happy to add them to the list of recipients if you'll tell us their names and addresses.
Department Introduces Industry Field Trip Course

Jerseys on the farm of Jim Ahlem, Hilmar, gaze curiously as a line of notebook-toting students passes.

The class poses for a group picture at A.L. Gilbert's feedmill in Keyes.

Not many animal science students expect to be in a tomato field on the first day of fall term to watch the sunrise. On this windy September morning, however, still shaking out the cobwebs, nine students and four faculty members listened as the TriValley Growers' representative, Brett Tank, explained the fundamentals of process-tomato harvesting. The students were enrolled in the department's newest course offering, a three-day, overnight field trip touring various agricultural production and processing operations in the Central Valley.

Offered for the first time last September, the class had two themes, the industrialization of agriculture and the role of animal agriculture in the food production chain. Dr. Ian Garnett, faculty member and one of the course organizers, believes "it is important that we expose our students to the major changes occurring in both animal management systems and product processing. These changes are raising a number of important social issues which our students should be exposed to."

Both faculty and students were enthusiastic about the course. Rose Morales, an animal science senior, thought the "field trip was a great learning experience and gave me a chance to meet other students in my major as well as faculty." Faculty member Dr. Jim Fadel noted the "trip strengthened the relationships between faculty and students" as well as "the relationship between the Department of Animal Science and persons associated with California agriculture. Amy Saunders (December Animal Science graduate) thought the outside-the-class approach was the greatest benefit of the course. "The educational value surpassed that of courses taught solely in a classroom with textbooks for we were able to see agriculture in action first-hand," she said.

Eleven different sites were visited. These included Zacky Poultry growout and processing facilities, J.S. West table eggs, TriValley Growers Modesto Processing Plant and Hilmar Cheese.

The class was made possible through the financial support of the Animal Science Memorial Fund.

Students (l to r) Mariah Slusser, Santina Mongold, Rose Morales and Lorrell Kanney examine a field of cotton with Dr. Jim Fadel on the dairy farm of Jack delong in Hanford.

Professors Ed DePeters, Jim Fadel and Y.B. Lee (l to r) discuss the tomato harvest with TriValley Growers field manager Brett Tank and tomato grower Roy Gill of Dixon (r).
**Department Welcomes New Staff Employees**

**Jake Burns**
The Meats Laboratory has a new manager, Jake Burns. Jake is responsible for operating our USDA-inspected slaughter plant including meat processing and sale. He also instructs students and interns in the more practical aspects of meat science. Jake grew up in Rocklin and graduated from California State University, Chico. Before coming to Davis in December, he worked for two years in the Meats Laboratory at CSU Chico. He lives in Loomis with his wife, Cathy, and their daughter, Kelsey, 9.

**Jan Carlson**
Jan Carlson assumed duties as Animal Resources Supervisor at the department’s Dairy Goat Facility in December. She is responsible for the breeding and management of over 200 goats used in teaching and research. She also supervises student interns at the facility and teaches goat husbandry in the Animal Management Practices course series. Jan is a native of Washington State. After earning her B.S. degree at Washington State University, she worked for 20 years in the WSU Department of Microbiology and Pathology (School of Veterinary Medicine) as their livestock manager. Before moving to Davis, she was self-employed in Stephenville, Texas, as a breeder of Boer goats.

**Courtney Jacks**
Courtney Jacks is our new Graduate Program Assistant. She provides administrative support for the Master of Animal Science, Master of Avian Sciences and Master of Agriculture and Management graduate degree programs administered by the department. Her duties include providing information and advice to prospective and current graduate students, assisting the Graduate Committee and graduate advisors in processing graduate applications, keeping students and faculty abreast of policies and procedures relative to graduate studies and maintaining graduate student records. Courtney grew up in Tennessee and earned a B.A. in Philosophy at the University of Memphis. Last August she moved to California from London, England. Her husband, David, is working on a Ph.D. in Economics.

**Kelly Wade**
Kelly Wade joined the department in December. As our new Administrative Assistant III in the Main Office, Kelly is responsible for organizing and processing over 20 faculty merit and promotion packages each year. She also processes all payroll, personnel and benefit transactions for the department as well as graduate student employment. In her spare time, she manages the main office. Kelly, a native Californian, grew up in Woodland. She was previously employed in the Payroll Division of Accounting and Financial Services on campus. She has a son, Gared, 8, and a daughter, Jordan, 3.

**Parrot Outreach Program**

**Jim Millam,** Vice Chair and Professor of Animal Science and director of the Psittacine Research Project, decided to let a parrot do the talking in the Parrot Outreach Program to educate the public on conservation, animal biology and responsible pet care. Paired with Animal Science undergraduate volunteers, various avian actors from the collection of tamed birds from the Psittacine Research Project colonies as well as companion birds owned by the volunteers presented hour-long traveling presentations to local elementary classrooms in Yolo County. Senior Christine Hoover and the show-stealing Blue-and-yellow Macaw, Oscar, were particularly successful.

The Outreach Program gives the students a chance to gain experience handling and learning about parrots as well as honing public speaking skills through their community service. Of course the classroom teachers and children benefit from the interesting live, animal-based contribution to their science curriculum. Everybody wins.

The program was inspired by the successful UC Davis Raptor Center outreach programs, and with the leadership of Hoover, who had worked with those earlier programs, new volunteers were trained and eased into classroom situations. Responses have been enthusiastic from the dozen UC Davis students who participated, and classrooms were willing to make donations that covered the expenses of the program. Oscar, less than a year old, will continue his theatrical career. Web-based follow-up opportunities are being developed for elementary students.

For more information about this program, call Jim Millam at 530-752-1149 or parrots@ucdavis.edu.
Fall Barbecue

Department staff member Joel Van Eenennaam and son, Kyle

Department Hosts Western Animal Scientists

The department is rolling out the carpet for the 2000 Annual Meeting of the Western Section of the American Society of Animal Science. The meeting, to be held on campus from June 21 to 23, will feature a Beef Industry Symposium as well as oral and poster presentations describing scientific studies on behavior, genetics, nutrition and physiology. A Career Forum for graduate students will be offered to provide information and advice on successfully pursuing a career in the animal sciences and animal industries. Social events are planned for spouses and children. Extension Specialist Jim Oltjen is serving as chair of the organizing committee.

Animal Science Judging Team Brings Home Prizes

The Animal Science Judging Team returned from the Arizona National Livestock Show in Phoenix on January 2 with great results. Erica Rosa took the top sheep judging score for an individual and third overall for individuals, as well as fourth for individual reasons scores. The UC Davis team took third overall for team scores, third for team reasons, third for sheep and fifth for swine judging. This is impressive considering they were competing with nine other teams in their first competition of the year. Members of the UC Davis team were Rosa, Jed Asmus, Rachel Bradley, Jean Miller and Cassie Reed.

On January 14, the team found itself competing in Denver at the National Western Stock Show. There the team placed 13th overall of the 26 teams: 7th in team sheep judging and 9th in team cattle judging. Iowa State took first overall. Among individual awards, Rosa took 7th in beef judging and Bradley 14th, and Asmus placed 11th in sheep judging.

Stock Trailer Fundraiser

The Animal Science Show Teams (Beef, Dairy, Sheep, Swine, Horses and Dairy Goats) are looking forward to acquiring a new stock trailer to haul animals to shows and youth field days, as the current one is desperately in need of replacement. So far the team has received $7,250 in donations towards this purchase from the Animal Science Memorial Fund and the Office of the Dean of the College of Agricultural and Natural Resources. This amounts to about two-thirds of the price, leaving approximately $4500 lacking. Any donor wishing to contribute to this campaign may call Dana Van Liew, 530-752-1256 or email him at dbvanliew@ucdavis.edu or mail a check in the enclosed envelope, designating the contribution to the Animal Science Show Teams Trailer.
Notable Notes

Graduate students have been successful lately. Pablo Corva, a Ph.D. student in Dr. Juan Medrano’s laboratory, recently received a support fellowship funded by the World Band and the Universidad de Mar del Plata, Argentina. The sponsoring program is the Fund for the Improvement of Teaching Quality in Universities. Corva will complete his Ph.D. in genetics in June 2000. Carol Conway, a Ph.D. student in Dr. Bernie May’s laboratory, received an Environmental Protection Agency Fellowship. Cynthia Batchelder, a graduate student in the laboratory of Professor Gary Anderson, department chair, has been presented with the first annual Monsanto Fellowship Award.

Professor Joy Mench was elected President of the International Society for Applied Ethology at the society’s September meeting in Norway. She has also just been elected to serve on the Council on Accreditation of the Association for the Assessment and Accreditation of Laboratory Animal Care (AAALAC) beginning next July.

Patrick Blacklock (MAM 1996) was recently appointed Vice President of Government Relations for the California Cattlemen’s Association. Michelle Macfarlane (MS 1998) has moved from Director of Media and Member Services to assume Blacklock’s responsibilities in federal land management issues and to assist in state advocacy issues. Michelle’s new title is Director of Public Affairs.

Carrie Devine, staff student advisor, received a $1000 1999 College of Agricultural and Environmental Sciences award for her oversight and advising of the new, cross-departmental Animal Biology major. Carrie’s work has made a tremendous difference in strengthening this collaborative program.

John Voris, who retired in June 1999 from UC Extension but who continues on a part-time basis, was recently recognized by the California Poultry Federation as their Person of the Year at the group’s annual conference in Fresno. The award recognizes his many years of service to the poultry industry.

Professor Francine Bradley, Dr. Gideon Zeidler, an Animal Science Cooperative Extension Specialist located at UC Riverside, and Jennifer Near, a Winter 2000 graduate of Avian Science at UC Davis, recently authored a chapter, “Avian Meat and Eggs,” for the Encyclopedia of Food Science and Technology, published by John Wiley & Sons.

Another recent publication, Avian Genetic Resources: An Assessment and Proposal for Conservation of Genetic Stocks in the USA and Canada, included among its multiple authors several from our department: J.M. Pisenti, M. Delany. U.K. Abbott, H. Abplanalp, F.A. Bradley, G.P. Moberg and B.W. Wilson. This Report No. 20, September 1999, was published by the Genetic Resources and Conservation Program of the Division of Agriculture and Natural Resources. See also their Web site: www.grc.ucdavis.edu.

Assistant Professor Mary Delaney organized and chaired the Poultry Genome Workshop session of the Plant and Animal Genome VIII Conference in San Diego January 8 and 9. This meeting was the forum for the members of the Poultry Genome Subcommittee of the National Animal Genome Research Program, with academic and government participants and researchers and industry representatives from all over the world.

Delaney was also on the organizing committee, an invited speaker and the Poultry Species Workgroup chair for the Third DISCOVER Conference on Food Animal Agriculture: Preserving Animal Germplasm Diversity – A Call to Action, held October 31 to November 3, 1999, at the Abe Martin Lodge in Nashville, Indiana. This conference was the kick-start for the USDA’s Agricultural Research Service to develop their “Livestock Germplasm Preservation initiative. Eric Bradford, Professor Emeritus, also participated in a species workshop.

Professor Ernie Chang has been appointed to the California Sea Grant Advisory Board, whose mission is to advise the President of UC and their director of the California Sea Grant on research, education and outreach activities. He continues to serve as the acting director of the Bodega Marine Laboratory.

Professor Dennis Hedgecock, geneticist at Bodega Marine Laboratory, was elected to the Council of the American Genetic Association, which publishes the Journal of Heredity.

Donald D. Bell, Fellow of the Poultry Science Association

Donald D. Bell was recently unanimously elected as a Fellow of the Poultry Science Association in recognition of his internationally known research in cage layer management, flock recycling, beak trimming, egg quality and egg marketing and of his service to the industry. Fellow, an honorary title, was awarded this year to only two people in the country.

After receiving his B.S. in poultry science from UC Davis in 1955, Don completed military service, worked as a Poultry Farm Advisor in Orange and Riverside counties, then returned to study at Colorado State University where he was granted an M.S. in 1972. He was promoted to Poultry Specialist in 1983. He has served 41 years as a Poultry Advisor and Specialist with the University of California.

Don has always tackled industry problems and provided practical solutions. Besides his research, he has contributed to educational programs throughout the world, organizing symposia and presenting his work at them. An important contribution was as co-author of the 4th edition of Commercial Chicken Production Manual, the most comprehensive reference text on the subject. His popular newsletter contributions number in the thousands, especially those in “Egg Industry Update,” the monthly he instigated in 1983, and in “California Poultry Letter,” to which he contributed beginning in 1978.

Don has been a member and officer of the Poultry Science Association, the World Poultry Science Association (director of its US branch), the Pacific Egg and Poultry Association and the Inland Empire Poultry Association, as well as serving as associate editor of Poultry Science and of Journal of Applied Poultry Research. Don received the 1968 PSA Pfizer Extension Award, a 1977 USDA Award for Superior Service and a 1983 UC Distinguished Service Award. The Pacific Egg and Poultry Association named him “Person of the Year” in 1991 and “Poultry Scientist of the Year” in 1994. Clearly he has earned this title of Fellow. Congratulations, Don!
Byron Muller retired in January with 38 years of service. He started with Food Science and Technology but transferred to Poultry Husbandry within two years, serving first at the Hopkins Research Facility, then at Asmundson Hall and finally in the Meyer Hall small animal unit. He was feted recently at Little Prague Restaurant in Davis by 58 faculty, staff and former students. Byron and his wife plan to travel doing missionary work with their church.

Ken Taylor retired in December after 30 years with the department. He began working at the feedmill, for a time assisted Dr. Paul Gregory with his dwarf cattle herd, worked for Dr. Wade Rollins at the beef barn, then moved to manage the horse barn. There he oversaw the breeding program and general management of the horse herd as well as contributed knowledgeably and effectively to the teaching program. He and his wife Nancy are looking forward to doing lots of sailing.

Carol Wallace Burnside retired recently from her position as administrative assistant to three successive chairs over ten years to move to Weaverville, Oregon, with her husband, Howard. They plan to enjoy the golf courses whenever the sun shines.

Ted Mori left his position as manager of the Meat Lab to become the Quality Assurance Director for the Sausage Factory in Carson City, Nevada. Ted graduated from UC Davis in Zoology in 1987. His wife Ann Mori is joining him there, leaving the department where she has served as office manager since 1994.

La Donna Foley left the management of the Dairy Goat Facility on campus to follow her husband to a new position in Temple, Texas. La Donna completed her B.S. and M.S. here in Animal Science.

Wolfgang Pittroff, a native of Germany, joined the department in August 1999 as Assistant Professor.

Pittroff graduated from University of Goettingen in 1984, worked for the Centre for Tropical Agriculture at the University of Hohenheim, Germany, from 1984 to 1988, then represented the German Agency for Technical Cooperation (GTZ) in Ethiopia from 1988-1991. From 1991 to 1992 he worked at Texas A&M University as a visiting research associate and in 1992 started a PhD program in the Department of Range Land Ecology and Management. graduating in 1997. Pittroff worked as postdoctoral fellow until December 1997 in same department, going as a research scientist for USDA-ARS to the US Sheep Experiment Station in Dubois, Idaho.

Pittroff's special research interests include nutritional monitoring of grazing livestock; integration of grazing management with livestock management; regulation of feed intake and diet selection in ruminants; and mathematical modeling of livestock systems that consider simulated biological and economic factors.

HIGHLIGHTS
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