

UC Cooperative Extension Humboldt County 2006 Year in Review



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**UC COOPERATIVE EXTENSION
HUMBOLDT COUNTY AGRICULTURE CENTER
5630 SOUTH BROADWAY, EUREKA, CA 95503-6905**

The Humboldt County Extension office would like to thank all of our clientele for their support for the educational programs we offer. 2006 was a year of change and transition for some of the Extension staff.

Gary Markegard, the Range/Natural Resource Advisor and County Director retired in July after 31 years of Extension work. Gary was a key component of our Extension program and worked with landowners and agency managers on numerous livestock and ranch issues. His life-long commitment to 4-H livestock programs is unparalleled. We wish Gary well in his retirement.

In the interim, I have been asked to take on the role of Acting County Director for Humboldt County. I have been in Extension for 30 years serving as Sea Grant Advisor and Del Norte County Director addressing the needs of marine resource users in Del Norte County and Curry County, Oregon.

In order to fill Gary's vacancy in Humboldt County, the University conducted a national academic search for a new Livestock/Natural Resource Advisor in 2006. We will be welcoming Alan Bower to the Humboldt Extension office in May 2007 as the County Director and Livestock/Natural Resources Advisor.

Alan comes to Cooperative Extension from the Natural Resources Conservation Service (USDA) in Quincy, California where he was a Rangeland

Management Specialist. We hope that everyone has a chance in the near future to meet Alan and utilize his expertise in range and natural resource planning.

The farm advisors, marine advisors and staff research associates continue to conduct quality research, educational and outreach projects. The 4-H youth development program continues to grow into new project areas and continues its well established project and club work.

New and continuing research and educational projects included:

- Humboldt Bay Ecosystem management project
- Water quality testing for nitrates in Eel River valley wells
- Hispanic outreach project for agriculture business development
- Sudden Oak Death monitoring and eradication project
- Razor clam growth and aging study
- 4-H training and support for 12 traditional clubs
- Sponsoring of 18 major 4-H events including Horse Camp, Environmental Camp and Presentation Day
- Completion of three-year juvenile rockfish study

A summary of these and other activities are presented in this review. These programs are designed to improve the lives and well-being of people in Humboldt County and I hope that you are impressed with the quality and relevance of the Extension programs.

Jim Waldvogel,
Acting County Director

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VISION:
To develop and facilitate the implementation of innovative, useful solutions to agricultural, natural and human resource issues.

See back page for upcoming calendar of events!!!

Yana Valachovic, Forest Advisor

2006 was one busy year.

The year started off with a huge effort to try to manage the growing problem associated with the disease known as **Sudden Oak Death (SOD)**. The infested area in Humboldt County represents the northern gateway for disease expansion. Our efforts are being closely followed regionally, nationally and internationally, as few have ever attempted any wildland management efforts of this pathogen.

Specifically, from January to May, SOD Project Coordinator, **Chris Lee** and I led an effort to experimentally treat 120 acres of private and public land to test how effective thinning, pruning, fire and the use of Agri-fos (a phosphonate fungicide) can be to control the pathogen. This effort is in collaboration with USDA Forest Service, California Department of Forestry and Fire Protection, California State Parks, the Southern Humboldt Fire Safe Council/Institute for Sustainable Forestry, several foresters and supportive landowners. We thank everyone involved with these efforts and acknowledge their tremendous support and dedication to this research.

We hope our treatment alternatives will allow us to: 1) learn how to effectively respond to any new disease outbreaks, 2) control pathogen spread from the Southern Humboldt area, and 3) develop long-term treatment strategies to manage this damaging pathogen.

Almost one year later we are just beginning monitoring efforts to determine if the treatments were effective. The results so far are promising, but not definitive. This study represents the largest experimental management effort in California.

I continue to offer the weeklong educational program for K-12 classroom teachers known as the **Forestry Institute for Teachers** every July. This program brings essential natural resources curriculum to the classroom, thus providing tomorrow's leaders with the knowledge to make better natural resource decisions. In this fun week, thirty



Yana Valachovic in the woods



Chris Lee with CDF on a prescribed fire

teachers learn about the ecology and management of Humboldt County's forests and streams and meet many of the managers, scientists and landowners in the region. In the evaluation of the program one teacher commented, "Thank you for the truly enriching, delightful, and eye-opening experience. You have developed a remarkable program. Nothing was trivial, or superficial—I can use everything."

Other noteworthy efforts included policy work with the collaborative **Buckeye Forest Project** team. The group drafted a legislative campaign to extend the life of a Timber Harvest Plan to five years with two one-year extensions (from three years with two one-year extensions), to allow landowners more flexibility to capture high log markets and avoid low log markets. The legislation was successful, in that it advanced a good policy conversation, but it was not approved by the full legislature. A related 2007 effort will follow the progress of the Program Timberland Environmental Impact Report (PTEIR) development for the Mattole watershed, led by the Mattole Restoration Council. A progress report should be given at this year's Forest Landowners of California annual meeting in Fortuna in May 2007.

Look for a new **Forest Stewardship Class** this fall for landowners that will offer information on techniques and resources for forest land management. We will cover the basics from understanding what resources and resource options forest landowners have on their properties, to planning for the future.

In conclusion, my educational and research programs focus on management and stewardship of forested ecosystems. I work with natural resource professionals from both public and private organizations, landowners managing industrial, non-industrial and public lands, and the general public. While I respond to current needs with specific technical assistance, I also have many long-term projects and roles.

Susan Schlosser, Marine Science Sea Grant Advisor

In 2006, my program focus was on the Humboldt Bay Cooperative Eelgrass eradication project and several ecosystem-based management planning efforts.



The Humboldt Bay Cooperative Eelgrass project includes California Department of Fish and Game, Humboldt State University, Humboldt Bay Harbor Recreation and Conservation District, and California Sea Grant.

The **Humboldt Bay Cooperative Eelgrass** project continued eradication of invasive Japanese eelgrass. Shoreline surveys were conducted to monitor for additional populations. In November 2006, another population was found in North Bay (on the Bay side of the western levee of the Arcata Waste Water Treatment Plant). This small patch (about 3 feet in diameter) was sampled for plant density and biomass, sediment samples were sent for size analysis and plant material was sent to an eelgrass geneticist to determine if this is a new introduction or an expansion of the Indian Island population. Furthermore, we completed five years of sampling native eelgrass and are working on publications. Many individuals and other organizations have assisted with sampling during this five-year project as indicated in the photo above.



Young of the black rockfish, about 2" in length, captured in Humboldt Bay, July 2006

Other programs in Humboldt Bay include **juvenile rockfish habitat associations**. Juvenile rockfish were in low abundance in 2006 but still strongly associated with eelgrass beds during June through September.

In another longer-term monitoring effort, invasive **European green crab** populations were monitored. We trapped fifteen green crabs this year in North Bay. This is

an increase from 2005 when 3 green crabs were trapped and 2004 when no green crabs were trapped. Researchers in Oregon have had similar results.

The **Science and Technology Alliance** for North Coast Estuaries addressed invasive plants, ecosystem-based management, Humboldt Bay database development, benthic habitat mapping needs, and a Humboldt Bay tide gate assessment. The STANCE Draft Framework for a comprehensive strategy for estuarine restoration in Humboldt Bay was also completed.

In 2007 I will be involved in the **Humboldt Bay Ecosystem Program**. This project will develop an ecosystem-based management framework; identify and develop two to six proposal on priority ecosystem issues; and recommend a method to establish a Humboldt Bay Ecosystem data base. The goal is to develop an improved understanding of ecosystem science and increased public involvement in natural resource issues. This project follows the recently completed Humboldt Bay Management Plan and the needs assessment "Linking Land and Sea" that identified the need for ecosystem approaches to management.



Juvenile black rockfish traps, returning from sampling.



Science and Technology Alliance for North Coast Estuaries members visiting an invasive eelgrass site in Humboldt Bay.

Peter Nelson, Marine Fisheries Sea Grant Advisor

My principle goal as a Marine Advisor is to provide marine constituents with quality extension services. These include rigorous applied research and an effective program of education and outreach that delivers useful information and facilitates knowledge sharing. In pursuing this objective, I have conceived of or joined diverse projects with county, regional, state and international significance, and have obtained grant funding for four major efforts. Established projects with a brief summary of objectives, methods and preliminary results are listed below.



Peter Nelson

Citizen-science is a means of combining basic research and data collection with public education and outreach. I have obtained funding for a project, in collaboration with University of Washington colleagues, to train local volunteers to monitor marine ecosystem health by identifying **seabird carcasses** on select beaches. These data are used to create a baseline for tracking populations of marine birds, and by extension ecosystem processes. The public is involved directly in marine science, and volunteers learn about ecological processes and how science works. In 2006, we trained seven local volunteers and began monitoring on five Humboldt and Del Norte County beaches.

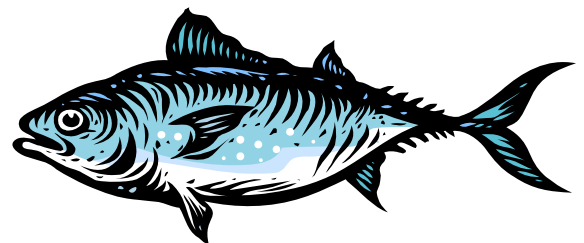
Tropical tuna purse seine fisheries capture large numbers of small, immature tuna as well as a suite of attendant species including sharks, billfish, mahi mahi and sea turtles. Last year, I worked with scientists from NOAA and the IATTC as well as academic scientists from the U.S., Europe, the Pacific and Latin America to develop and test fishing gear modifications and ecological models using fisheries data to reduce this bycatch. In 2006, I presented results from behavioral experiments, tests of bycatch reduction gear and quantitative models to predict bycatch in purse seine sets.

Ground fish support economically important fisheries on the Pacific coast. Central to successful management is an understanding of fish recruitment—habitat specificity, seasonality and annual variability. Methods for obtaining the requisite data are varied, but none is suitable for all conditions. I have been working on developing a broadly

applicable method for collecting useful data, regardless of habitat type, depth or water conditions. With a fisherman colleague, I have designed, built and begun testing an easily built and inexpensive fish trap. I am also developing collaborative research that will use these methods to correlate recruitment data with oceanographic surveys of larval abundance conducted by NOAA and Humboldt State University scientists.

Despite the tremendous research efforts on the biology of **coho salmon** (*Onchorhynchus kisutch*) in freshwater and marine habitats, little is known regarding their ecology in estuarine habitats. With US Fish & Wildlife scientists, I have obtained funding to seek basic behavioral/ecological knowledge on how juvenile coho use estuaries. This information will aid in efforts at preserving and restoring essential fish habitat, and in understanding the role of estuaries in coho salmon ecology.

Finally, during 2006, I began a project addressing economically important alternative **shellfish production** practices. All research is conducted in collaboration with representatives of the East and West Coast shellfish industries. The goal of this project is to provide the industry with the information and tools to move forward proactively in achieving the regulatory compliance needed to assure it can continue in a sustainable and viable operation far into the future.



We are also on the web!
<http://cehumboldt.ucdavis.edu>

Ken Andersen, Dairy & Ag Waste Management Advisor

The focus of my program is on the challenges faced by the dairy industry. These challenges include:

1. Daily management issues in the areas of herd health, nutrition, pasture management, irrigation, labor, etc.
2. The presentation of sound science that addresses manure management with an emphasis towards low environmental impact.
3. Extending current scientific research from the University of California and the UC Vet Med Center to the dairy producers.

In 2006, the Humboldt County Resource Conservation District and I sponsored the **Environmental Stewardship Short Course** with Dr. Deanne Meyer from the Animal Science Dept. at UC Davis. The purpose of this workshop was to increase the awareness of dairies on the potential impacts manure management practices may have on ground and surface water.

In 2006, along with Dr. Thomas Harter (UCCE Groundwater Specialist), I conducted a **groundwater survey** for nitrate and mineral levels in the Eel River Valley. These results are due to be published in 2007 and will yield critical information needed by dairy

producers to evaluate their manure handling management and will tie into research conducted statewide by Dr. Harter.

Also, in 2006, I collected additional data to complete the data set collected in 2005 for **traveling irrigation guns**. These results are slated to be published soon by Dr. Blaine Hanson, UCCE Irrigation Specialist.



The Newlyweds—GOT MILK???

Gary Markegard, Livestock & Natural Resources Advisor-Retired

We congratulate Gary on his 31 years of service and wish him only the best during his long and fulfilling retirement. In appreciation for his efforts, here are some of his notable accomplishments.

Gary provided leadership in pasture and range management to the livestock industry, bringing programs to the County such as the Ranch Water Quality Short Course, Dairy Quality Assurance, TMDL Inventory and Monitoring, and in a variety of weed management activities, including efforts to manage yellow star thistle, capeweed and tansy ragwort.

He has been dedicated to the youth of Humboldt County, through tremendous support and service to a wide variety of 4-H programs, both at the county and club level. He has personally mentored a long list of



Gary Markegard

4-H youth in livestock showmanship and husbandry while supporting the Junior Livestock Auction, the county fairs and a number of other community-based activities.

Gary served the Humboldt- Del Norte Association of Cattlemen, Humboldt County Wool Growers, Humboldt County Farm Bureau, Humboldt County Fair, Redwood Acres Fair and Rodeo, and many

other people and organizations that make up the heart of Humboldt County.

Gary has been the quintessential public servant and educator who was always available, cheerful, and interested in helping the public with their questions and concerns. He was a wealth of knowledge on a wide variety of subjects well beyond livestock production and will be truly missed by our department.

Deborah Giraud, Farm and Community Development Advisor

My work is organized around three broad issues:

1. Sustainability of Agriculture
2. Public Horticulture
3. Community and Economic Development

In 2006, I organized several **workshops** for farmers to gain new information and network with each other. The value-added workshop last spring was an eye opener for farmers thinking about selling processed food. We had three excellent speakers who could “tell it like it is”. Starting from scratch is certainly not for the faint of heart as there are many challenges.

The **Master Gardeners** have been busy with projects around the county. A new class is currently going through the workshop sessions process. A new collaboration with the Botanic Garden has begun, and many Master Gardeners will become new docents for the gardens in 2007.



The **farm and ranch succession** program provided a two part statewide conference held in Sacramento in January and March. 100 people came to this important conference to learn about succession communication skills, business planning, tax issues, succession planning and many more topics. It was a very intense conference filled with hopes, dreams and hard work. Succession must be planned for, and is one of the most difficult issues for landowners, working farmers, ranchers and families to tackle.

California FarmLink (Steve Schwartz) was my major collaboration along with the Northern California Ag Credit Business Consultant, Rod Carter. Western Risk Management, California Farm Bureau and several other groups who sponsored the Farm Succession program. Thanks to everyone! Keeping the land in active agricultural production and profitable for the families is the ultimate goal.

My outreach in **economic and community development** includes assisting farmers,



Deborah Giraud

ranchers and commercial producers in developing new sources of income as well as organizing themselves to be stronger and develop goals. I am continually searching to obtain grant funding for education and research projects.

A regional workshop for commercial **dairy goat** herd owners was held on June 6th, 2006 and was a success. Our main speaker from Langston University, Steve Hart, is a goat nutrition expert. I also worked with the Goat Milk Producers Association in a project that helped them with business plans, operational efficiencies and production records. New equipment was recently purchased with two grants.

I have two major research test plots:

1. a landscape plant irrigation study
2. a study of nematode control on Easter lilies

The **landscape plant irrigation** study is attempting to discover answers to some complex water issues, one of which is conserving water while maintaining desirable landscapes in our cities. The test plot is at the UC Hopland field station. We are stressing some plants to the point of causing undesirable traits, while others enjoy almost full watering regimes. Science-based recommendations will be developed.



With the **nematode control study**, we use many materials, including some which are organically accepted, to combat these devastating pests.

My **Farm to School** project has been active for seven months. We have been working with farmers, schools and other institutions in trying to get locally produced foods provided for the school children. Jack Surmani has been acting as a broker and we hope to see more and more local foods being sold in our schools and throughout the area. Consumers (especially parents of school children) need to help drive the demand. It is all part of making our farms sustainable, keeping businesses alive and keeping our land productive.



Sandy Sathrum, 4-H Youth Development

4-H Youth pledge “their heads to clearer thinking, their hearts to greater loyalty, their hands to larger service, and their health to better living for their clubs, their communities, their country and their world.” 4-H grows stronger kids, stronger families, stronger communities and a stronger world.

Mission: “To engage youth in reaching their fullest potential while advancing the field of youth development.”

4-H teaches real world life skills and workforce preparation while developing civic responsibility and leadership in youth. Families spend quality time together exploring and growing in beneficial activities.

There are **12 traditional clubs** in communities throughout Humboldt County. 4-H is also delivered through the **4-H TRAIL** therapeutic riding program for disabled youth and adults; the **Manila Community Services District 4-H After School Program**; 4-H **Northern Humboldt Eyes for the Blind** (guide dog training); **Redwood Coast Institute** challenge activities for at risk youth; and **Coastal Grove Charter School 4-H Science Program**. This year Humboldt County 4-H managed the **State 4-H Youth in Governance** program with 5 youth-adult partnership teams making significant impacts on community needs in Humboldt, Lake, and Mendocino counties. Humboldt County’s three teams included the (1)Coffee Opp (developing a drug-free & violence-free hang out place for teens), (2)Youth for Positive Change (a teen board working in prevention with Humboldt County Alcohol and Other Drug), and (3)Jacoby Creek Charter School Service Learning Ambassadors (restoring the wetlands on their school site). Outreach efforts are continuously made to serve underrepresented groups within our county. Presentations are given at schools, community events, service organizations, network collaboration meetings and through many personal contacts.

There are **510 youth members** in our traditional clubs and many more youth are involved through our other delivery modes. These youth are enrolled in **1563 project groups** ranging from animals, bicycling, computers, gardening, outdoor adventure, robotics,



Sandy Sathrum, Program Rep

shooting sports to welding. **4-H sponsors 18 major events focusing on developing skills** in public speaking, leadership, problem solving, planning & organization, citizenship, and personal safety and healthy lifestyle choices. The county **4-H All Stars**, Teen Ambassadors, provide vital leadership roles and support clubs and county events. They sponsor the annual **NORTHCOST Youth Summit** (www.ysummit.org) to empower teens (and those who work with teens) from all organizations to hone their skills and make our communities stronger. 170 youth and adults

from Humboldt, Del Norte, Trinity and Mendocino counties participated in this year’s event. Youth (with adult mentors) design and chair major county events including 4-H Camp, Humboldt Equestrian Ride for Life, County and Regional Presentation Day, 4-H Horse Camp, a domestic exchange, Parade Safe Horse Seminar, Ag Day, & OMSI (Oregon Museum of Science and Industry) Science Camps.

We have **211 project leaders** leading 363 project groups or serving as club or county leaders. All volunteers are screened, oriented and trained to work with youth. Research based curriculum is provided for project work. Adult volunteers guide and support youth as they learn by doing. The County 4-H Leaders Council, composed of adults and youth, assists in overseeing the county-wide 4-H program.

4-H partners with other non-profit youth organizations, businesses, service clubs and educational groups within our county. Some key collaborators this year were the HSU’s YES House, the Community Network, NorCAN, Jacoby Creek Charter School Service Learning, Top of the State Service Learning Regional Network, Friday Night Live, Boys and Girls Club, Ink People and the GATE Network.

One of the keystones of 4-H is **community service**. Youth provide countless hours of service through their projects, their clubs and in their communities with beach clean-ups, habitat restoration, pet therapy to seniors, horseback riding for the disabled, Relay for Life, guide dogs for the blind and deaf, Valentines for Veterans, Easter cards for Meals on Wheels, fair clean up, food drives and a host of **support** for community organizations and events.



CALENDAR OF EVENTS

- May 8, 2007** **Session 3-Environmental Stewardship Short Course for Dairy Producers**
1:30pm through 3:30pm at the Ag Center, For more information call Ken Andersen at 445-7351
- May 19, 2007** **Coastal Observation & Seabird Survey Team (COASST) (Eureka)**
Volunteer training workshop
10am through 6pm at the Ag Center
Anyone can enroll and participate, For more information call Pete Nelson at 443-8369
- May 20, 2007** **Coastal Observation & Seabird Survey Team (COASST) (Crescent City)**
Volunteer training workshop, 10am through 6pm in Crescent City-Lake Earl Wildlife Area Headquarters
Anyone can enroll and participate, For more information call Pete Nelson at 443-8369
- Fall 2007** **Forest Stewardship Workshop** series will be for present or prospective landowners
To discuss tools and technologies to accomplish your ownership goals
This course will be tailored to interests of participants.
Time and date to be announced, will coordinate with the Owing Rural Lands workshop series (below)
For more information call Yana Valachovic at 445-7351
- Fall 2007** **Owing Rural Land:** this series will include how to manage forests, grasslands, woodlands, what crops
can be produced profitably, with information about soil fertility, water issues, roads, etc.
Let us know what you would like to learn about ! Times and dates to be announced.
For more information or to give suggestions, call Deborah Giraud at 445-7351
- Winter 2008** **Personal Sustainable Finances.** This workshop will probably have four sessions and cover many topics
which apply to ranch and farm owners, as well as personal financial issues everyone can relate to. Times
and dates to be announced. For more information call Deborah Giraud at 445-7351.
- 4-H EVENTS:**
- | | | |
|-------------|--|--------------------------------------|
| April 21 | Parade Safe Horse Seminar | Redwood Acres |
| May 13 | Dairy Goat Field Day | 11am-5pm, Redwood Acres |
| June 20-24 | Redwood Acres Fair | Eureka |
| July 6-8 | 4-H Summer "Survivor" Camp | Maple Creek |
| July 9-12 | 4-H Horse Camp | Cuneo Creek |
| July 15-19 | Domestic Exchange | Humboldt County hosting Oklahoma 4-H |
| July 24 | Annual Awards Night | Redwood Acres |
| July 27-29 | OMSI 4-H Environmental Camp | Wolf Creek |
| August 2-5 | State 4-H Leadership Conference | UC Davis |
| August 9-19 | Humboldt County Fair | Ferndale |

Check our website for more upcoming events: <http://cehumboldt.ucdavis.edu>

University of California
Cooperative Extension-Humboldt
5630 South Broadway
Eureka, CA 95503-6905

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Cooperative Extension Programs in Cooperation with U.S. Department of Agriculture, University of California and Humboldt and Del Norte Counties.