

TAYLOR RANCH FIELD STATION 2002 ACTIVITIES AND ACCOMPLISHMENTS

Annual Report for the year 2002

**By Holly and Jim Akenson, Taylor Ranch Managers/Scientists
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HIGHLIGHTS of 2002

Once again, Taylor Ranch Field Station operated at full capacity throughout the summer season. Despite state and national budget woes, programs at Taylor Ranch continued at the same level as 2001. University of Idaho programs at Taylor Ranch, including summer student internship programs and carnivore research were funded through private donor sources. A highlight of this year was strengthening relationships with our private sponsors. Clara Bleak, Internship sponsor, spent a week at Taylor Ranch working with student interns. Janet DeVlieg Pope visited the undergraduate bat project, which was funded by the DeVlieg Foundation. Three students and Holly and Jim Akenson made presentations to the DeVlieg Foundation on research sponsored by the DeVlieg Foundation. A new Taylor Ranch web page showcases recent projects and student activities and reaches beyond the University of Idaho community.

Six educational opportunities were offered to students, including WLF 302 Wildland Ecology, several internships, and a wildlife enrichment course. Thirteen established research projects were continued in 2002 and 3 new projects were initiated. Scientists at Taylor Ranch spent 891 user-days conducting research in the wilderness surrounding the field station. Jeff Braatne became involved in Taylor Ranch projects. He supervised an undergraduate student research project and coordinated with Idaho State University on the hyperspectral GIS vegetation analysis. The NASA supported hyperspectral analysis project will provide a foundation for future research collaboration between Idaho State University and University of Idaho scientists. Jim and Holly completed the 4th and final year of the winter carnivore – ungulate research. Fire related research continued on aquatic systems, amphibians, and large mammals. Delayed effects of fire were discovered by David Pilliod in the age structure of the tailed frog population. Fire at Taylor Ranch is still a topic of interest to the public; Holly and Jim made several presentations on fire to classes and conferences.

The primary limitation to Taylor Ranch Field Station programs was limited housing. Use exceeded capacity for much of the summer. We could not encourage growth of programs, due to the lack of facilities. The new high-speed satellite Internet connection put a strain on the lone computer at Taylor Ranch, as student demand for Internet time increased. The Taylor Ranch Advisory Committee met several times to discuss cabin replacement and review plans from log cabin kit manufacturers. Tom Gorman, Ed Krumpe, Jim Akenson, and Holly Akenson will coordinate construction plans, helicopter transportation of supplies to Taylor Ranch, onsite logistics and construction. The DeVlieg Foundation generously committed \$100,000 toward the construction of the new building, named the DeVlieg Living/Learning Center. We expect to have a completed building by early summer. Next year we will seek NSF funding for enhancements to field station facilities, equipment, and communications.

RESEARCH AND MONITORING

1. J&H Akenson & 2 CNR Wildlife graduates: (UI, DeVlieg Fnd & Hornocker Wildlife Institute) Winter wolf and cougar predation and interactions (4th year).
2. J&H Akenson & Rita Dixon: (UI DeVlieg Foundation Taylor Ranch Undergraduate Research Grant) Undergraduate Student Initiated Wilderness Research Project: Katie Gillies: Bat inventory of Big Creek drainage
3. R Lewis & D Stewart: (Idaho Geological Survey) Geological formation mapping (3rd year)
4. D Pilliod & K Strickler & W Minshall: (University of Montana, Aldo Leopold Wilderness Research Center & ISU) Amphibians and fire - tailed frogs (3rd year)
5. J Peek & WLF302 class: (UI) Rangeland vegetation monitoring (15th year).
6. W Minshall/Graduate students: (ISU) Aquatic invertebrates and fire (14th year).
7. J Braatne: (Hungerford Undergraduate Research Grant): S Miller: Aquatic invertebrate populations post fire
8. J&H Akenson: (UI, National Weather Service) weather station (21st year) and meteorological station (9th year).
9. C Peterson and W Minshall: (ISU) NASA sponsored hyperspectral aerial photography and GIS vegetation analysis (2nd year). J Akenson and J Braatne initiated collaboration between UI and ISU.
10. C Peterson: (ISU) Amphibian research coordination (2nd year)
11. S Achord: (NMFS) Salmon parr PIT tagging at Taylor Ranch to assess survival rates at dams (7th year).
12. B Sanderson: (NMFS) Anadromous fish nutrition (1st year)
13. J Rohlman: (IDFG) Elk census
14. J&H Akenson & Idaho FNAWS: (UI, Foundation For North American Wild Sheep) Bighorn sheep population monitoring (2nd year).
15. R Keifer: (IDF&G) Anadromous fish research, redd counts (4th year)
16. L Kingsbury & J&H Akenson & Student Interns: (UI, USFS) Sheepeater Indian Archaeological Investigation
17. J&H Akenson: (UI, IDF&G) Long term animal monitoring data: ungulate populations; sensitive species surveys (Harlequin ducks); necropsy; and sightings reports on TES species (4th year).

EDUCATION,

1. Wildland Field Ecology 302: 10 undergraduate students taught by J Peek & J Rachlow.
2. Taylor Ranch Bleak Foundation Summer Student Internship Program: 3 undergraduate students taught by H&J Akenson.
3. Taylor Ranch DeVlieg Foundation Wilderness Research Program: 3 undergraduate students mentored by H&J Akenson, R Dixon.
4. Ecohydraulics/Engineering NSF Science Education program: 5 high school students, 2 undergraduates, 1 graduate student supervised by P Goodwin
5. Wilderness Wildlife Ecology enrichment class: 9 students taught by J. Peek.

SPONSORS

1. Clara Bleak spent a week at Taylor Ranch participating in activities with Bleak Student Interns: bear DNA collecting, mule riding, and birding. She met many of the previous Bleak Interns in Moscow when we hosted a reception for her the previous fall. The Bleak Endowment continues to provide funds for 2-3 student intern positions at Taylor Ranch each summer.
2. Holly and Jim Akenson, Crystal Strobl, Chris McDaniel, and Katie Gillies made presentations at the DeVlieg Foundation Board Meeting on their research projects funded by the DeVlieg Foundation.
3. Janet DeVlieg participated in Katie Gillies' bat research: surveying bat caves and attempting to mist net bats for species identification. This is the second year of support for the DeVlieg Foundation Taylor Ranch Undergraduate Research Scholar program.
4. Mitze and Gene McHale visited Taylor Ranch in summer with Mark Hermanson and worked with student interns. They have pledged \$2,000 for support of student internship activities next year.

FACILITIES

1. Facility capacity was exceeded during summer due to the loss of housing facilities in the 2000 forest fire. The primary problems this year were septic system overload and overcrowded cooking and bathroom facilities.
2. Taylor Ranch had 910 user-days of research and educational activities in 2002. We received lodging income of \$4829 for 322 nights of use.
3. Scientists spent 891 user-days conducting research in the wilderness surrounding Taylor Ranch Field Station.
4. A new trail easement with Payette National Forest was drafted to reflect minor changes in the description of 2 trail locations.
5. Fence construction (\$11,000 from USFS for replacement of fire damaged fencing): buck and rail and electric perimeter and cross fencing.
6. Junk cleanup: fly out discarded appliances and scrap material accumulated over 50 years.
7. Deck built on Arlow's Cabin.
8. Lower pasture restoration: install pump irrigation, harrow, reseed, control weeds.
9. Develop plans for replacement cabin.
10. Annual projects: firewood cutting/hazard tree removal, grounds maintenance, hay harvest, hydro system maintenance, building maintenance, winterizing.

OUTREACH and COOPERATIVE PROGRAMS

1. NASA hyperspectral photography/GIS analysis: jointly funded by ISU and UI/CNR.
2. New Web Page developed for Taylor Ranch Field Station.
3. Historic Registry proposal from Peter Preston to list Taylor Ranch.
4. Jim and Holly Akenson were invited speakers to the North American Forest Biology Conference, presenting the story of experiencing fire and its aftermath at Taylor Ranch.
5. Holly and Jim made several presentations to U of I classes on fire or wilderness topics.
6. Jim Akenson was an invited speaker for a predation panel at the Oregon Chapter, The Wildlife Society.

UPCOMING EDUCATION AND RESEARCH ACTIVITIES IN 2003

1. The Field Ecology course, Bleak Internship, DeVlieg Research Internship, Ecohydraulics program, and Enrichment course will all be offered again in 2003.
2. McCall High School Environmental Science class is planning a weekend field trip to Taylor Ranch Field Station in May. Jim and Holly will provide educational activities for students.
3. Student Interns will participate in an archaeological excavation of an Indian site with a USFS archaeologist.
4. Long-term research and monitoring programs on weather, vegetation, aquatic systems and fish, amphibians, ungulates, carnivores, and fire will continue in 2003.

UPCOMING PROGRAM DEVELOPMENT

1. A grant proposal will be developed for a National Science Foundation Field Stations and Marine Laboratories facilities and equipment grant.
2. A remote data collection/monitoring plan will be developed to be included in the NSF grant application.

UPCOMING FACILITIES PROJECTS IN 2003

1. The major facilities project for the year is the construction of a "kit" log cabin to replace the cookhouse and bunkhouse that were burned in the Diamond Point Fire in 2000. Tom Gorman, Ed Krumpe, Jim Akenson, and Holly Akenson will coordinate construction plans, helicopter transportation of supplies to Taylor Ranch, onsite logistics and construction of the log cabin.
2. The DeVlieg Foundation generously committed \$100,000 toward the construction and completion of the new cabin, named the DeVlieg Learning/Living Center.
3. A separate septic system will be installed for the new cabin to handle the increased use and capacity at Taylor Ranch.
4. Wireless Internet capability will be addressed.
5. We will investigate funding sources for an office at Taylor Ranch.