

Okanogan and Wenatchee National Forests

FREE!

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Cascade Lookout — 2006
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Okanogan and Wenatchee National Forests

A Note from the Forest Supervisor



JAMES L. BOYNTON

This 10th edition of the Cascade Lookout is quite a milestone. Over the past 10 years, employees of the Okanogan and Wenatchee National Forests have written more than 150 articles for this annual newspaper.

Stories have ranged from recreation opportunities, historical pieces, changing Forest Service programs and policies, to information about local festivals. The common thread in each of these stories is the pride each author has taken in writing about an important current issue or forest-related topic that is near and dear to their hearts.

We all love these national forests. Whatever one's outdoor recreation pastime might involve, whether it be driving, sightseeing, camping, fishing, hiking, horseback riding, or ORVing, the Okanogan and Wenatchee National Forests are a rich source for outdoor enjoyment. Cascade Lookout articles attest to the diversity of natural treasures that can be found in these two forests. I hope that you enjoy the articles in this current edition.

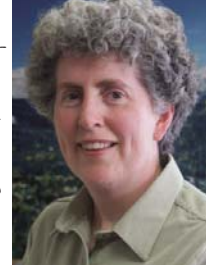
Along with commemorating the 10th edition of the Cascade Lookout newspaper, we celebrate the arrival of our new Deputy Forest Supervisor Karen Mollander. Karen replaces Alan Quan,

who was named as the Supervisor of the Prescott National Forest in Arizona last May.

Karen brings a remarkable breadth of experience and talent to the job. She has a degree in History from Bryn Mawr College in Pennsylvania, a law degree from Cornell Law School in upstate New York, and a degree in resource conservation from the University of Montana in Missoula.

Karen has been a district ranger in Pennsylvania and Alaska. She worked as a Forest Service legislative specialist in Washington D.C. and was the State and Private Forestry field representative in New Hampshire, serving seven eastern states.

Karen and her husband, James, now live in Wenatchee. They love traveling, and in Karen's spare time she enjoys knitting and gardening. If you happen to visit our headquarters office in Wenatchee, please stop in and say hi to Karen and welcome her to beautiful North Central Washington! ■



Karen Mollander

Be Bear Aware Out There

ROBIN DeMARIO



Seeing a bear while hiking, camping, fishing, or enjoying other outdoor recreational activities is a thrill to be long remembered.

Although encounters with bears are infrequent, they still occur, so visitors to the Okanogan and Wenatchee National Forests need to know what to do to minimize the chance of having a "too-close-for-comfort" encounter with bears. Grizzly Bears are rarely sighted on those forests, but Black Bears are more common; the advice in this article applies to both species.

A bear's natural diet is plants, fruits, and roots supplemented, where available, by fish, insects, carrion, deer fawns, and elk or moose calves. Bears do not naturally associate people with food, but they are opportunistic feeders.

By following basic precautions of proper food storage and camp cleanliness, campers can minimize close encounters with bears. Campers should obey posted rules for the camping area. Camp away from areas where you see bear sign (tracks, diggings, droppings, etc.). Keep a clean camp.

Hang all food, trash, and other smelly items 100 yards from camp and at least 10 feet above the ground and 4 feet from any vertical support. Don't burn food scraps in your campfire as the smell can entice bears into your camp. Keep tents and sleeping bags free of food odors and don't keep any food in your tent.

Don't sleep in the same clothes you wore while cooking, eating, or cleaning fish. By following basic precautions of proper food storage and camp cleanliness, campers can minimize encounters with bears.

Hikers should not hike alone in the woods, since bears are less likely to approach a group of people. Always stay alert and wary in places where there is food favored by bears, such as berry patches and near carcasses of large animals.

Be especially alert if hiking near dawn or dusk. Bears are active any time of the day but are most often encountered at those times. Avoid startling a bear. Make noise as you hike by talking, singing, or clapping your hands so that bears can hear you approaching. If hiking with children, make sure they stay near you at all times.

If you do have a close encounter with a bear, the first thing to do is to stay calm. The bear will probably leave you alone; just don't make abrupt moves or noises that would startle the bear. Calmly group together and pick up small children. Do not run, make sudden movements or make direct eye contact with the animal which may cause the bear to charge you. Give the bear plenty of room. Slowly detour, keeping upwind so it will get your scent and know you are there. If you cannot

detour, look for a climbable tree while waiting for the bear to move away from your route.

If the bear clacks its teeth, woofs, pants, growls or slaps its paws on the ground—it is warning you to back off. Give the bear a chance to identify you as a human, and not a threat. Let the bear calm down and retreat. Talk firmly in a low-pitched voice while backing away. Keep backpacks on for added protection. Retreat to a place of safety without running.

If the bear continues to approach or charges, members of your group should become increasingly aggressive by shouting at it and throwing rocks. If the bear attacks you fight back by hitting its nose and eyes with your fists, and kicking. Use walking sticks, pans, branches, and rocks to defend yourself.

Bear behavior is often a result of its individual experiences. There is no single assured protective action to take during an encounter or attack. The best way to be bear safe in the forest is to be aware of your surroundings, plan ahead, and know what to do if you encounter a bear.



BEAR FACTS:

- Black bears occur only in North America in mountainous or forested habitats.
- Black bears may be black, brown, cinnamon, grey, and even pure white in color.
- In the fall, pregnant females enter dens first. In the spring, they and their newborn cubs are the last to leave their dens.
- During the denning period (5 to 6 months) bears don't eat, drink or eliminate waste.
- Bears usually have litters of 1-4 cubs; the average litter size is 2.
- All bears have good vision and will sometimes stand on their hind legs to obtain a better view of something that interests or concerns them.
- Bears have an excellent sense of smell. They can run considerably faster than a human and are very good swimmers. ■

Although Lewis and Clark's 1804-1806 "Corps (or Voyage) of Discovery" did not come into our local area, the botanical collections and plant discoveries they made along their Pacific Northwest route left a permanent mark on our plants and plant names.

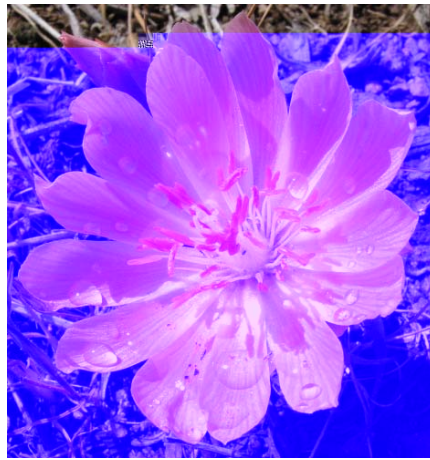
In our area, there are a number of plants whose names have come from either Lewis or Clark. In many cases they discovered plants unknown to science at that time. Although they did not find some of the plants that are currently named for them, they often discovered closely related species. Some of the most striking specimens in the genera *Lewisia* and *Clarkia* are found in our area.



TWEEDY'S LEWISIA (LEWISIA TWEEDYI)
photo: Terry Lillybridge
This plant is endemic to the Wenatchee Mountains, Chelan and Kittitas Counties, and is also found in the Methow Valley and Manning Park B.C. It grows in rock crevices, talus slopes, and rocky banks, chiefly in ponderosa pine habitats.



COMMON CLARKIA (CLARKIA RHOMBOIDEA)
photo: Nannette Neely
The flowers of this plant do not close at night. It is found in forests and woodlands ranging from southern British Columbia to southern California, mostly in the East Cascades in Washington, east to Idaho, Utah and Arizona.



BITTERROOT (LEWISIA REDIVIVA)
photo: Terry Lillybridge
Bitterroot roots were a highly prized food for Native Americans. They were dug in the spring during flowering, boiled and eaten. Lewis tried the root but found it "bitter and nauseous."

A number of other related species are in these genera. Two local plants get their scientific names from the work of the "Voyage of Discovery" group, the mock orange (*Philadelphus lewisii*), and Lewis' monkeyflower (*Mimulus lewisii*).

Along with collecting and identifying plants, Lewis and Clark recorded Native American uses of some plants. One edible plant for which Native American use was documented by Lewis and Clark was Bare-stemmed Desert-Parsley (*Lomatium nudicaule*). Native Americans would eat the tops of this plant and sometimes boil it with their soup.

On their trip west through present-day Washington in the autumn of 1805, few flowers greeted Lewis and Clark as it was too late in the season for many flowers to be blooming. As they were heading home in the spring of 1806 though, the men saw hillsides along the Columbia River covered in arrowleaf balsamroot (*Balsamorhiza sagittata*). Native Americans ate the stems of this bright yellow-flowered plant and used the roots to make soap.

The Voyage of Discovery added lots of plant information to our knowledge and the results of that expedition are evident today in the plant kingdom of the Pacific Northwest and the Wenatchee Valley.

To learn more about many local plants named by or named for Meriwether Lewis and William Clark, attend one of the many wildflower walks that are scheduled each spring in and around the Okanogan and Wenatchee National Forests. In early spring, call the Forest Headquarters office in Wenatchee (509) 664-9200 for information about local wildflower walk opportunities. ■

LEWIS AND CLARK'S CORPS OF DISCOVERY and the Plants of the Wenatchee Valley

TERRY LILLYBRIDGE



ARROW-LEAVED BALSAMROOT (BALSAMORHIZA SAGITTATA)

TICKS —Yucky and Dangerous!

WAYS TO PROTECT YOURSELF FROM TICKS:

- Avoid tall grass and shrubby areas.
- Stay close to the center of hiking trails and avoid brushing against vegetation.
- Wear long-sleeved shirts tight at the wrists, long pants tucked into socks, and shoes covering the entire foot.
- Wear light-colored clothes that show ticks easily.
- Examine your body for ticks, and pay special attention to your head (including your scalp), back, neck, armpits, and groin area.
- Examine pets closely for ticks, especially around the head and inside the ears.
- Wearing an insect repellent also might help. Read and follow all precautions and directions on the label.



Forest visitors enjoy views of nesting waterfowl or catching a glimpse of wildlife, but there is one forest critter that no one wants to meet up with—the tick!

These nasty creatures can be a real threat because they carry many serious diseases such as Rocky Mountain spotted fever, Lyme disease, typhus, rickettsial pox, relapsing fever, tularemia, Colorado tick fever, and Texas cattle fever. The best defense against ticks is knowing where they live, how to protect yourself against them, and what to do if you find a tick imbedded in your skin.

Most ticks spend the bulk of their life on or near the ground, waiting for a suitable host. Since they cannot run, hop, fly or move quickly, ticks must climb onto an appropriate object such as tall grass or weeds or up onto fences and siding of buildings. There they wait for a suitable host to pass by. When they detect vibrations and chemical cues, such as host odors or exhaled carbon dioxide, ticks will fall from their perch or reach out and hope to attach to a passing host.

Ticks are very well adapted to hang on to any host they happen to touch. They have crablike legs and a sticky secretion that helps hold the tick to the host, and harpoon-like barbs in their mouth that attach to a host for feeding.

It is important to remember to save any tick that is found attached to the skin. Save the tick in a vial or Ziploc bag with a damp cotton ball or paper towel (this method keeps the tick alive longer or hydrated so that it can more easily be tested later on).

If a rash (or other illness develop), within the following four weeks, take the tick and the person involved to a doctor. Proper identification of the tick and timely treatment is of utmost importance when dealing with organisms associated with ticks.

HOW TO REMOVE TICKS

- If you find a tick on your body, remove it as soon as possible.

- Use tweezers ONLY.

- Make sure you've cleaned your hands, the bite site, and the tweezers with disinfectant.

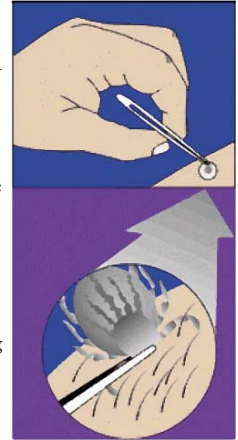
- When attempting to remove a tick, to prevent the mouth part from coming off and remaining embedded in the skin, grasp the mouth close to the skin with tweezers and pull gently up and out.

- Do NOT use nail polish, Vaseline, matches, or other methods (the latter procedures may traumatize the tick and cause it to regurgitate its gut contents).

- Disinfect the bite afterward with antiseptic.

- Place the tick in a container for later identification.

- Never remove a tick with your fingers, as the squeezing could further inject infectious material into the wound.

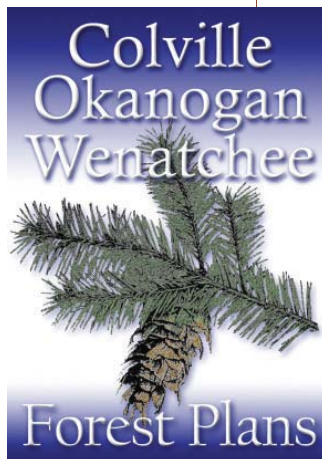


The illustration above is from www.fda.gov/ldac/features/696_flea.html. Much information included in this article is from this website. Photo: discoverlife.org

Forest Plan Revision Continues

Public Invited to Participate

RICK ACOSTA



Revision of the Forest Plans that guide management of the Okanogan and Wenatchee and Colville National Forests is in its third year, on track for completion in 2007.

These land and resource management plans serve as a sort of “blue print” that directs management of each national forest. As the revision process proceeds, interested members of the public are always welcome to contribute their ideas on how Forest Plans should be updated, or on how the national forests should be managed.

By law, Forest Plans must be updated every 10-15 years. Revision of the Forest Plans is necessary to account for social, economic, and ecological changes which have occurred over the life of the plan. The current Forest Plans for the three national forests were implemented in 1990.

Forest Plans define how the Forest Service manages the national forests. Each national forest has its own plan which establishes the desired condition for the land and resources, and sets general management direction.

A relatively new regulation, known as the 2005 Planning Rule, directs the Forest Service revision of its Forest Plans. Although the Forest Service has historically sought out the ideas of the public that it serves, the 2005 Planning Rule places even more emphasis on public involvement and collaboration in all phases of Forest Plan revision.

“As we work with interested people, we will focus on bringing people with divergent viewpoints together. We’re looking to develop a Forest Plan that sustains economic, social, and ecological conditions that are beneficial to both

people and the land,” said Jim Boynton, Forest Supervisor of the Okanogan and Wenatchee National Forests.

Since the revision of the Forest Plans for the three national forests is expected to be completed by the end of 2007, there’s still plenty of time to share your ideas with the Forest Service.

Some public meetings have already been held, and more will be scheduled as planning continues. Besides public meetings, you can also participate anytime by writing us via U.S. Mail, e-mailing us your comments, or by giving us a call on the phone. For more information on Forest Plan Revision, you may also access our web site. Here’s how you can reach us.

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Environmental Management Systems (EMS) is a new tool for the Forest Service to use in furthering its goal of “Caring for the Land and Serving People.”

Under an Executive Order signed by the President in 2000, all agencies of the Federal Government were required to use an EMS approach for managing environmental impacts.

What is an EMS?

EMS is a management framework that can be used by any business or agency to assist in the task of identifying and managing the environmental impacts associated with its activities. It is an internationally recognized process for establishing and monitoring environmentally friendly industrial, agricultural, and forest management practices.

EMS identifies management activities that could cause a severe environmental impact if no management controls were in place. Rules and procedures called “operational controls” are implemented for such activities to prevent undesired impacts.

The EMS is a process that uses documentation and periodic audits to help us do what we say we’ll do. A central theme in EMS is continual improvement of our environmental management. It formalizes “adaptive management” as the way we do business.

The Okanogan and Wenatchee National Forests and the Colville National Forest are the first forests in the nation to complete EMS Guides and implement the program this year. An EMS Guide

is a manual or handbook for implementing the Environmental Management System. Twelve other national forests nationwide will complete EMS Guides in 2006.

The Guide can be updated and modified as needed to address changing management priorities, to correct errors, and to continually improve our environmental management.

An EMS website will soon be available for the Okanogan and Wenatchee National Forests and the Colville National Forest with links to more information. It will also have a feature allowing website visitors to offer suggestions on how to improve our environmental management. In the meantime, general information about Environmental Management Systems is available on the national EMS website at: www.fs.fed.us/emc/nepa/ems

The Okanogan and Wenatchee National Forests along with the Colville National Forest will begin following documentation requirements and adhere to EMS operations controls beginning May 22, 2006.

For more information about EMS please contact Viva Worthington, EMS coordinator for the Okanogan and Wenatchee National Forests and for the Colville National Forest, at 509-852-1075. ■

Environmental Management Systems

JOHN TOWNSLEY

Your Recreation Fees at Work

JIM ARCHAMBEAULT
RECREATION PLANNER



In 2005, the Okanogan and Wenatchee National Forests received nearly \$800,000 in revenue from the Recreation Fee program. These funds were important in providing needed maintenance and operation funds for the Forest's trails and campgrounds. Fee revenues paid directly for maintenance of 657 miles of trail, helped match "State Interagency Committee for Outdoor Recreation" (IAC) grants and other grants to maintain another 1,674 miles, and helped facilitate volunteer maintenance of an additional 484 miles of trail.

Recreation fee revenue helped fund maintenance and operation of the docks at boat-in sites on Lake Chelan, groomed ski trails at Echo Ridge, operated a reservation service for visitors to the Enchantments, provided opportunities for family gathering of Christmas trees, staffed information and interpretive services for visitors, and maintained six recreation rental cabins.

In 2005 about \$670,000 was spent on recreation projects on the forests. Using grants and volunteers these funds were multiplied several times over.

The following activities were accomplished at Ranger Districts using Recreation Fee revenue:

TONASKET RD

Funded campground hosts at Bonaparte Lake and Lost Lake throughout the visitor season.

Volunteers constructed a fenced parking area at Salmon Meadows (to designate a parking area and protect the rest of the meadow)

Gathered about 1,000 pounds of garbage from about 200 separate sites in the Wilderness

METHOW VALLEY RD

Constructed and installed 24 new picnic tables, installed 24 new fire grates, funded six campground hosts, and paid for collection of garbage from campgrounds.

Matched a grant from the Spring Family Trust to reconstruct the foot log bridge across Canyon Creek.

CLE ELUM RD

\$63,000 of fees were matched and leveraged for \$229,000 of grants.

Youth crews (Student Conservation Association and Northwest Youth Corps) accomplished trail work on the Pacific Crest Trail.

The front office opened on three weekends to sell Christmas tree permits and funding was available for field patrols.

WENATCHEE RIVER RD

Developed historic, cultural, and natural resource interpretive materials for kiosks at trailheads.

Facilitated 1,060 days of volunteer work.

Leveraged \$126,000 of grant money with fee revenue.

Funded the Enchantment Reservation System, wilderness patrols, and toilet removal.

Extended office hours in the evenings and on weekends to sell Christmas tree permits.

CHELAN RD

Echo Ridge revenue was leveraged twice with the Lake Chelan Nordic Ski Club and with IAC.

Volunteers removed brush encroaching on 3 miles of new trail and mowed 8 miles of trail with volunteer valued labor of \$2,060.

Mitchell Creek Breakwater was repaired and the dock deck at the Deer Point Campground was replaced.

Provided a Host at Snowberry Campground.

ENTIAI RD

About 300 miles of trail was maintained partially with fee revenue.

Leveraged \$35,000 of fees in support of a grant for campground maintenance.

Provided a host for major holiday weekends at Fox Creek, Lake Creek and Silver Falls Campgrounds.

NACHES RD

Maintenance and operations at trailheads and campgrounds.

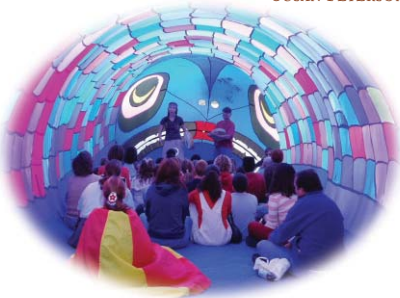
Repaired and opened American River Guard Station, making it available for rent

Provided interpretive signing at Bumping Lake Boat Launch



Wenatchee River Salmon Festival

SUSAN PETERSON



Wenatchee River Salmon Festival 2006 will be changing its dates just for this year. The free weekend event is on Sept. 30-Oct 1, 2006. In honor of our salmon, this year's theme is "Homeward Bound."

Wenatchee River Salmon Festival is dedicated to providing high-quality resource education, promoting outdoor recreation and sharing the cultural significance of salmon with the people of the Northwest. We appeal to every age...from child to senior citizen...for the many fun activities, outstanding physical setting, and unique approach to connecting with nature. The festival is 16 years young and has received many awards for its environmental education quality and community involvement.

A special exhibit this year is "Inspirations from the Forest," an exhibition produced by the Smithsonian Center for Folklife and Cultural Heritage in partnership with the Forest Service and the

National Endowment for the Arts. The 16-panel exhibition represents the "Forest Service, Culture and Community" portion of the 2005 Smithsonian Folklife Festival held on the Capitol Mall in Washington, D.C. The program commemorates the 100th anniversary of the Forest Service.

The Bavarian themed town of Leavenworth, Washington (selected as the "Ultimate Holiday Town USA" by the A&E Network) is just up the road from the festival with excellent accommodations and services. We are located in the heart of the Cascades, so whether it's festival-going, hiking, shopping, or wine tasting on your agenda, it's all in the same neighborhood.

Come and enjoy, learn, and gain a better appreciation of our natural resource treasures, then relax and listen to the wind whisper to the river through the pines...join us, this September 28 - Oct. 1, 2006. For more information, swim over to our website at www.salmonfest.org

For eight decades, the closest encounter most wildlife biologists have had with wolverines in the Pacific Northwest has been seeing a set of tracks in the snow.

That changed for an interagency team of researchers and biologists this winter. A young female wolverine was captured and fitted with a satellite radio collar initiating the first scientific study of wolverines ever conducted in the Pacific Northwest.

Two members of the interagency team, wildlife biologists John Rohrer of the Okanogan and Wenatchee National Forests and Scott Fitkin of the Washington Department of Fish and Wildlife received word that a wolverine had been successfully captured in one of their traps in the Harts Pass area.

After immobilizing the wolverine with a sedative, the team went to work evaluating her health, taking measurements and tissue samples for genetic analyses, and installing a radio collar to report her movements via satellite. Researchers named her Melanie. She weighed about 19 pounds, and was in excellent health. She hadn't had kits yet, and was probably just a year old.

The capture was the culmination of several years of survey work in north-central Washington to document wolverine presence and to begin to understand their habitat needs. "We know so little about these rarely seen animals that this is an exciting opportunity to learn more about their general ecology in the north Cascades," Fitkin said.

Researchers were disappointed when about a week after being collared, Melanie seemed to have slipped her collar off. Using the satellite signal, they had followed her movements north into Manning Provincial Park in Canada.

The collar is located in a very high rugged and inaccessible area. Locating it on the ground will have to wait until snow melts this summer. "Wolverines are renowned for their ability to get rid of radio-collars if they want to," said Rohrer. "Some tolerate collars well but others don't, so we knew this was a possibility."

Rohrer and Fitkin continued checking three wolverine traps daily throughout the winter. Fresh wolverine tracks were found near the trap where Melanie was caught giving researchers hope of recapturing her or another wolverine for radio collaring.

That is exactly what happened! In mid April, an adult male wolverine, probably 3-5 years old in prime condition, was captured and radio collared with a refurbished and strengthened radio collar. "We hope that this male will tolerate the radio collar better than Melanie did," Rohrer said.

At about the same time, pictures obtained from a remote camera at the site showed another wolverine, this one wearing two bright yellow ear tags—it was Melanie! "So, not only is she alive and well, she has found a boyfriend," added Rohrer.

"We learned two significant things from capturing and radio-collaring Melanie," noted team leader Keith Aubry, Research Scientist with the Forest Service's Pacific Northwest Research Station. "We now know that field research can be conducted on wolverines in the North Cascades using live trapping and radio telemetry techniques. In addition, since we have been able to capture two wolverines now, this provides added evidence that there is a resident population of wolverines in the North Cascades to study."

Research is needed to understand wolverine habitat requirements in the Northwest, in hopes of maintaining needed habitat while minimizing conflicts with other land uses. "We plan to continue the research next year, and for as long as adequate funding is available," Rohrer said. ■



Wolverine Collared on the Methow Valley Ranger District

JOHN ROHRER, WILDLIFE BIOLOGIST
IN COLLABORATION WITH
SHANNON O'BRIEN, PUBLIC AFFAIRS SPECIALIST



WOLVERINES (*GULO GULO*)

weigh about 20 to 40 pounds, depending on sex and age, and are the largest land-based member of the mustelid family that includes weasels, badgers, and otters. Wolverines are found primarily in remote, alpine areas. They prey on everything from moose to mice, and often rely heavily on scavenging for food during winter.

I heard the familiar drumming of a woodpecker and walked down the slope to see if I could get a glimpse of it to see what species it was. To my surprise, through my binoculars I saw a woodpecker with a black body, white wing patches, and white head with a red patch on the back of its head. It was a male white-headed woodpecker! After three years of searching in this ponderosa pine stand this is the first one I had seen.



The white-headed woodpecker is a focal species for a whole group of species whose habitat is relatively open ponderosa pine forest with really big trees. They feed on seeds from the cones and forage on insects in the bark. They prefer to nest in areas made up of several large ponderosa pine trees so that they can forage efficiently while feeding and tending their young.

Habitat for the white-headed woodpecker, along with other species such as western bluebirds, was once quite common on the east side of the Cascade Mountains. However, years of fire exclusion along with selectively harvesting the large old pine trees has greatly reduced this habitat to well below historic levels.

Several researchers have documented the decline of the white-headed woodpecker and western bluebird in western forests and suggested that habitat restoration (using thinning and prescribed burning) may be needed to increase their numbers once more. To test this theory, we have been monitoring the effects of dry forest restoration treatments on birds over the past several years and are just now beginning to gain some insights into how birds are responding to these forest restoration efforts.

This brings us back to our avian friends! In three years of monitoring we never observed a white-headed woodpecker or western bluebird in any of the forest stands that were not treated. Now it appears that through careful planning to remove small trees, retaining the big trees, and underburning, we can restore habitat that these species will use.

These same fuel treatments are also successful in reducing the risk of high severity fire in these stands. We plan to continue our monitoring to better understand the longer-term effects of these dry forest restoration treatments. But for now, it appears that these efforts are a positive step to restoring habitat "for the birds." ■

Forest Restoration is "For the Birds"

BILL GAINES



Leavenworth Spring Bird Fest

GAIL ROBERTS, BIRD FEST COORDINATOR
AND DON YOUKEY, WILDLIFE BIOLOGIST



Every year, birders flock to Leavenworth for the annual Leavenworth Spring Bird Fest. The fourth annual Bird Fest was May 18th - 21st. If you missed it, make plans for next year. The Leavenworth area features spectacular habitats, ranging from snow-capped mountains to sunny ponderosa pine forests, and attracts a wide variety of birds. Festival goers search for Calliope Hummingbird, White-headed Woodpecker, Harlequin Duck, Osprey, Western Tanager, and a variety of warblers.

Participants gain greater understanding of why Neotropical migratory songbirds come to the Wenatchee River watershed for a very important, and brief, part of their year - to breed and fledge their young.



While birding is the heart of the weekend, activities also include geology, wildflowers, and conservation. Professionally guided tours and activities range from leisurely strolls to active hikes - fun for experienced and novice birders of all ages, and most events are free!

Highlights of this year's festival included:

- Saving the Song, keynote speech by Libby Mills
- Birding by Foot, Boat, and Bicycle
- The Falcon Research Group showed live birds rehabilitated from injury
- Art Shows
- Geology and Wildflower Walks
- Local research on barred owls and bird community changes after forest restoration
- Family Activities and Field Trips
- Owl Prowl trail hike at night in search of owls, bats, and other creatures
- Canyon Wren Songbird Concert capped off a weekend to delight the senses

Bird Fest is a unique partnership between the North Central Washington Audubon Society, Okanogan and Wenatchee National Forests, the Leavenworth Chamber of Commerce, North Cascades National Park Service Complex, U.S. Fish and Wildlife Service, Icicle Arts and Barn Beach Reserve, with generous help from the Icicle Fund. For more information, fly to our website at www.leavenworthspringbirdfest.com, or send us an email at birdfest@earthlink.net. Our program is posted to the website in mid-March. Pre-registration is recommended for many of the trips.

To preregister for a trip and/or arrange for lodging, please call the Leavenworth Chamber at (509) 548-5807 from May 1-17. ■

Mountain Pine Beetles and the Life and Death of Lodgepole Pine

CONNIE MEHMEL



Multitudes of insects can always be found feeding and breeding on and in trees. The most dramatic effects on forest trees are produced by a group of insects called bark beetles.

Many bark beetles are in the genus *Dendroctonus*, a word which means "tree killer." Colonies of these beetles can be found feeding on the nutritious layer of phloem just beneath the bark of dead or dying trees. Healthy live trees have many defenses against bark beetles. They have pitch which can physically block and trap beetles, and resins that are actually toxic.

Beetles must mass attack a host tree, overcoming its defenses, killing it with numerous feeding galleries they construct beneath the bark. Usually a weak or injured tree will be the focus of attack, but if the beetle population is very high even vigorous trees can be overcome.

Each species of bark beetle is a specialist, feeding on a single type of tree. The mountain pine beetle is a specialist in pines, and is closely tied to the ecology of lodgepole pine. It is a stout, black, cylindrical beetle, about 1/4 inch long, with clubbed antennae. On the Okanogan and Wenatchee National Forests, an estimated 2,400,000 lodgepole pines were killed by mountain pine beetles in 2005.

Lodgepole pine reproduces abundantly after forest fires. Whenever cone-bearing trees are burned, the pitch-sealed cones are opened by heat and seeds are scattered in the ashes. Carpets of seedlings may be produced this way.

Lodgepoles are precocious trees, growing rapidly as young saplings and producing cones at an early age. The trees compete with each other for sunlight, water, nutrients and growing space. By the time they are 80 years old, growth has often become very slow.

The trees may be under considerable stress, which makes them an easy target for mountain

pine beetles. They focus on the largest trees first, since these will provide the most food for the beetle colony.

Once a tree is overcome, the surrounding trees will be attacked, resulting in a patch of dead trees. By the time the outbreak is over, 85% of the largest lodgepole pines may be killed, as well as numerous smaller pines. The resulting dead trees provide fuel for the next wildfire.

There are some things that can be done to limit tree killing by mountain pine beetles. If trees are thinned to reduce competition they become more resistant to attacks. But thinning must be done while the trees are still fairly vigorous.

Trees that spend many years in overcrowded conditions will reach for the sun but will not increase in diameter. They may become so tall and thin that they will fall over if surrounding trees are removed.



In addition, many places where lodgepole pine grows are too remote for thinning. One of these places is the Tiffany Mountain area between Winthrop and Tonasket, where there has been an active mountain pine beetle outbreak since about 1994.

The mountain pine beetle is a native insect that has interacted with native pine trees for thousands of years. Mountain pine beetle and lodgepole pine have evolved together in fire-prone environments, producing a cycle of death and regeneration that ensures the survival of both species. ■

An innovative Stewardship Project first envisioned by members of a Northwest Forest Plan advisory committee is well under way on the Methow Valley Ranger District west of Carlton.

The Hungry Hunter Ecosystem Management Project is reducing fire hazard by thinning hundreds of acres of overcrowded dry forest, sending excess trees with value to lumber mills, and paying for a variety of improvements in the area. The project is located in the Hunter Mountain and Hungry Mountain areas.

Using new authorities from Congress, the project includes several activities in a single contract. "This greatly simplifies administrative costs, and the timber sold pays for other needed activities," said John Newcom, District Ranger.

Fuels reduction will be accomplished with commercial thinning in stands of trees large enough to have value, non-commercial thinning, piling, and burning of smaller trees, and use of prescribed fire with under burning to remove branches, needles, and brush.

Among other work being done is construction of about 10,000 feet of grazing allotment fence to establish boundaries and protect streamside riparian areas, re-construction of a cattle handling facility to protect a stream, and de-commissioning of about 12 miles of unneeded road.

"Exceptional snow and frozen ground conditions permitted winter logging operations all winter, completing commercial thinning on more than 600 acres and removing 3.5 million board feet of timber," Newcom said. "Winter logging has very little impact on soils, and the contractor has done an excellent job," he noted.

Thanks to one of its early developers, smokejumping may owe as much to the ski as it does to the parachute! The explanation lies with one of smokejumping's lesser known champions, Walter E. Anderson.

Walt Anderson joined the Forest Service as a fire guard at an isolated guard station in the Cascade Mountains of Washington State in 1924. He was 'woods wise' having grown up in the central Cascade Mountains. Walt and his brothers grew up hunting, fishing, trapping and hiking all over the woods. They were also experts at what we now call backcountry skiing (using home-made skis!).

In 1936, Walt transferred to the Chelan (now



Walt Anderson (fourth from right)

Okanogan) National Forest headquarters in Okanogan, WA, as the chief of fire control. History shows Walt was in the right place at the right time, because in 1939, the Forest Service announced it was moving the Aerial Fire Control Experimental Project from California to the Winthrop area in the Chelan National Forest.

This project had been conducting fire control experiments with water and chemical bombs. However, the Forest Service's Assistant Chief for Fire Control, David Godwin, wanted the project to evaluate the feasibility of parachuting firefighters into remote and inaccessible fires.

Walt took over as the project leader when the

The work is being done by stewardship contractor Longview Fibre Company, with workers from throughout Central Washington. Additional pre-commercial thinning and riparian area restoration will continue this summer, followed by continued commercial logging next winter.

A second Hungry Hunter Stewardship Project with more than 600 additional acres was to be awarded late this spring. That project includes additional thinning, road de-commissioning, and a different method of reducing hazardous fuels called 'mastication.'

Mastication involves mechanical grinding and chipping of non-commercial trees for thinning. It will be done on about 250 acres as a demonstration project so local landowners can compare various techniques of fuels reduction they may want to consider on their own forest lands.

An important part of the Hungry Hunter Stewardship Projects is active field monitoring of on-going and completed activities to see whether treatments work as planned, Newcom said. "Advisory committee members felt very strongly that these projects should be closely monitored, so we can apply lessons learned to future restoration projects in our dry forest areas in the Methow Valley and elsewhere."

Advisory committee members from a wide variety of citizen interests worked together with Forest Service employees to set objectives for the stewardship projects and review proposed activities.

"These are projects based on hard work, collaboration, and trust," Newcom said. "We expect them to be an important step for reducing wildfire hazard in this part of the Valley, and for setting the stage for other important projects in the future." ■

veteran Forest Service official assigned to oversee the project, Lage Wernstedt, suffered a stroke. In addition to helping evaluate the parachutes and other equipment proposed for smokejumping, Walt made another historic contribution to the field: he is credited with coining the term "smoke-jumper" to describe the new kind of airborne firefighter.

Walt didn't merely do his job from a desk in the office. Along with several other administrative and support personnel associated with the program, Anderson (who was 43 years old at the time) took three parachute jumps himself as part of the feasibility study. On his last jump, Walt landed hard and suffered a concussion-but that didn't dim his view of smokejumping.

What would entice a middle-aged Forest Service manager to try the relatively little-known practice of parachuting? After all, parachuting in 1939 was barely removed from aviation's barnstorming era. It was still regarded as a daredevil, crackpot activity in those days.

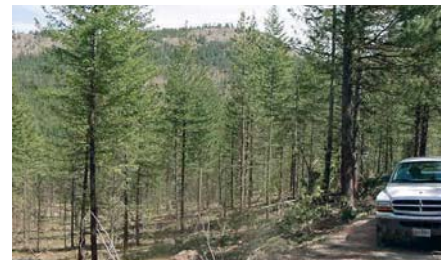
The answer would lie in Walt's hobby of ski jumping. As a dyed-in-the-wool Swede (Walt's Swedish parents had immigrated to the United States), he had practically grown up wearing skis.

In his 20s, Walt won several ski jumping tournaments, and he helped start and lead ski clubs in Leavenworth, Wenatchee, and Okanogan in the 1920s and 30s. Perhaps the allure of floating through the air and executing a perfect landing on skis suggested to Walt that parachuting would offer a similar thrill.

Walt and the rest of the Winthrop experimenters proved that smokejumping was feasible, and it continues to this day as one of the fascinating aspects of wildland firefighting. Walt Anderson-firefighter, fire manager and ski jumper-helped get it off the ground. ■

Hungry Hunter Stewardship Project Is Well Under Way

ARLO VANDERWOUDE

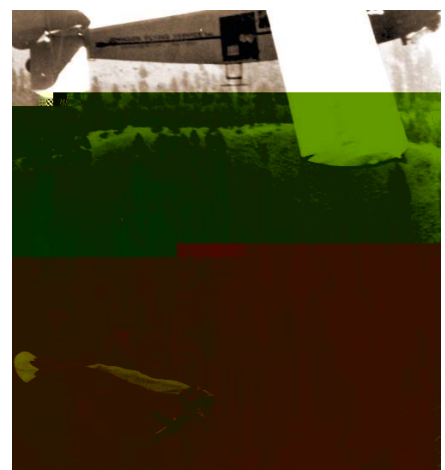


These photos were taken in the same spot — looking at untreated forest above the road (top) and treated forest below the road.

Smokejumping and Ski Jumping

Meet Walt Anderson, an early advocate and developer of smokejumping

KEN FREDERICK AND DOUG FREDERICK



ABOUT THE AUTHORS... Brothers Ken and Doug Frederick cut their teeth fighting fires on the Wenatchee National Forest, following in the footsteps of their great-uncle, Walt Anderson. Doug currently is the assistant fire management officer at the Turnbull National Wildlife Refuge near Cheney, WA. Ken is a public affairs specialist for the Bureau of Land Management at the National Interagency Fire Center in Boise, ID.

Forest Health in the Mt. Hull Area

SHANNON O'BRIEN

NORTH CENTRAL WASHINGTON PRESCRIBED FIRE COUNCIL

The North Central Washington Prescribed Fire Council is in the early stages of being formed to educate the public about fire's place in the environment. The Council's mission is to protect, conserve, and expand the safe use of prescribed fire on the North Central Washington landscape to meet both public and private management objectives.

Objectives of the North Central Washington Prescribed Fire Council include:

1. Promote understanding about benefits of Prescribed Fire
2. Promote the safe and responsible use of prescribed fire
3. Promote an accurate application of smoke management policies
4. Provide a framework for communications regarding prescribed fire objectives, techniques and issues

For more information call Dale Swedberg, Manager of the Sinlahekin, Driscoll Island, and Chilivist Wildlife Areas for the Washington Department of Fish & Wildlife at (509) 223-3358.

Students from Tonasket High School's Natural Resources Class joined Forest Service employees, local logging operators, and a representative of the Washington State Department of Fish and Wildlife on a field trip to the Mt. Hull Area of the Tonasket Ranger District. Discussions included forest health concerns and treatments being used to improve ecosystem health on a landscape basis.

Timber sales are only one tool used for treatment. "Logging is only about 30% of the work being done to improve forest health here," said Paul Nash, Silviculturist for Tonasket Ranger District. "Prescribed fire and thinning of trees smaller than 5 inches in diameter are two other treatment tools being used."

"Before European settlement, dry site forests, which describe nearly half of Tonasket District's 640,000 acres, experienced low intensity ground fires about every 7-12 years," explained Tonasket District Ranger Mark Morris. "In the 1920's, the Forest Service began suppressing wildland fires that had regularly removed most smaller trees as well as debris from the forest floor.

"Now, after decades of fire exclusion, excess ground fuels and crowded understory trees allow fire to more easily climb up into the upper canopy," Morris said. Overstocking then allows fire to move from tree top to tree top resulting in fires that are more intense than those seen in the past."

Without thinning, overcrowded trees are more likely to be killed by wildland fire. Increased spacing between trees reduces the chance of crown fires that spread through the tops of trees. While individual trees may still be killed by fire, keeping flames lower to the ground reduces fire intensity so many trees do survive.

In over-crowded dry forests the forest floor is now shaded. Species of trees and shrubs that once thrived in open forest groves now struggle to exist. Periodic fires are necessary to regenerate several

species of brush and shrubs needed for wildlife like deer.

"Another threat to overcrowded stands of trees is Dwarf mistletoe," Nash said. "It is a parasitic



plant spread by sticky seeds to trees within 50 feet of the host tree. Dwarf mistletoe can stunt tree growth by up to 33% and leave weakened trees more susceptible to insects and disease. However, dwarf mistletoe has some wildlife value, so a few infected trees, far enough away from other trees of the same species, are left in timber sale areas.

Insects also detect trees stressed by conditions such as overcrowding, Nash added. Bark beetles focus on them, boring in, cutting off the nutrient flow and killing the tree."

Students were given an opportunity to use the information they'd learned both in the classroom and on the field trip to designate trees to be cut in a forest grove according to a prescription for species, tree health, and spacing requirements.

During the 2005/2006 winter there were five timber sales on the Tonasket District, all within wildland urban interface (areas where houses are within or adjacent to the forest vegetation). Key objectives of these sales were reduction of overstocked stands to reduce the threat from insects and disease, and helping to protect adjacent landowners from the threat of catastrophic wildland fires. ■

Great Partnerships!

SHANNON O'BRIEN



Oroville Sportsmans club is a critical partner in the success of Fishing Day. They staff education stations, prepare food and beverages assist young anglers, such as this one, with casting, reeling in and netting the fish. Photo: Nancy Wells, Fish Biologist

Partnerships on the Tonasket Ranger District take many forms, including school children, foundations, volunteer groups, government agencies, and local landowners.

Partners are critical to the successful accomplishment of work on National Forest Lands. Their contributions are as varied as the sources that provide them, taking the form of labor, agreements, money and more.

For example, a recent grant from Defenders of Wildlife is being combined with Title II grant funds for installing bear proof dumpsters at Lost and Bonaparte Lake Campgrounds.

In the Okanogan Highlands, some bears have become habituated to feeding at campground dumpsters at Lost, Bonaparte, Beth and Beaver Lakes. While human/bear encounters are rare, they almost always occur where bears have been eating human food or garbage.

These situations become dangerous to people, cause property damage, and often lead to the death of bears verifying the adage that "A fed bear is a dead bear." Indeed, in 2003, two bears were shot at Bonaparte Lake as they were digging through garbage.

Installing the bear proof containers at Bonaparte and Lost Lake Campgrounds is part of a long-range plan to place bear proof refuse containers throughout the forest.

Many other partnerships result in the accomplishment of goals and objectives for Tonasket Ranger District. During 2005, some of the work accomplished through partnerships included:

Mineral Hill Weed control partnership with Okanogan County, Washington State Department of Natural Resources, and Washington State Department of Fish and Wildlife resulted in noxious weed inventory and weed control work. Increased

noxious weed control work is anticipated through that partnership again this year.

Okanogan Chapter of Backcountry Horsemen, Service Knowledge Youth Corps (SKY), Butte Busters Snowmobile group, Oroville Trail Riders, and others performed maintenance work on many miles of roads and trails. SKY crews cleared several miles of overgrown trail leading to Tungsten Mine in the Pasayten Wilderness. The work required packing in supplies and several nights spent camping out in the backcountry.

Fishing Day, a fun annual event providing educational opportunities for area children, is possible because of the contributions of local businesses, clubs, and individuals.

Volunteer hosts spent the summer answering visitor questions and performing light campground maintenance, while keeping the campgrounds clean and welcoming.

North Central Washington ATV club installed fencing at Salmon Meadows, designating parking and providing resource protection.

SKY crews worked with range permittees to accomplish fencing, water development, and erosion control work.

Dale Swedberg, State Wildlife Biologist and Manager of the Sinlahekin Wildlife Area, has been working with the Tonasket Ranger District to complete planning work for the Mutton Fuels Project. The project will include thinning and prescribed burning treatment on Forest Service and Wildlife Area lands.

Each range permittee assists the noxious weed management program with inventory and control work. One permittee, Les Kinney, obtained his herbicide application license and spent three months working on weed control on the Annie Allotment under a volunteer agreement. ■

The Chelan Ranger District, which encircles much of Lake Chelan, is one of the most unique ranger districts in the nation.

The 55-mile long, 1,500-foot deep lake is a natural thoroughfare through the rugged, mountainous ranger district where wheeled vehicle access is limited. Except for a few roads between First Creek and Twentyfive Mile Creek, and a couple roads on the north shore between Chelan and Manson, access to the district is by water.

Prior to European exploration and settlement, the Chelan region was inhabited by the Chelan Indians, a subgroup of the Middle Columbia Salish people that included the Entiat, Wenatchi, and people of the Methow.

There is evidence of seasonal Indian habitation at Refrigerator Harbor, and summer and fall hunting camps along Lake Chelan.

The Chelan Ranger District came into existence as part of the Washington Forest Reserve established by President Grover Cleveland on February 22, 1897.

In the period from 1890 to 1930, recreation development began almost as soon as railroad surveyors and miners explored the area. The beauty of the Lake Chelan area attracted early resort developers as early as the 1890's.

Barbara Shearer, who was a cook on an early steamboat, established Lucerne House. The Argonaut Hotel, later rebuilt and expanded into the impressive Field Hotel, was established at the Stehekin River delta as a "destination resort" where visitors arriving from across the country via rail and steamships would stay "for the season."

Communities originally established to support mineral exploration grew quickly as a result of the scenic quality and sporting opportunities. Fishing success at the mouth of the Stehekin River was legendary and hunters came from around the world for the opportunity to hunt mountain goats. Hunting success was so high that the Weaver brothers were able to establish a successful taxidermy shop at what is now Weaver Point.

In the 1930's the Civil Conservation Corps played a major role in our National Forests. They built Ranger Stations, camping shelters, roads, and cleared trails. Work by Civilian Conservation Corps crews opened up a whole new era for recreation opportunities on the Chelan Ranger District.



BOAT-IN CAMPGROUNDS

The boat-in campgrounds on the Chelan Ranger District offer a unique opportunity for campers visiting Lake Chelan. There are 17 boat-in campgrounds, including four managed by the National Park Service. A combined Forest Service and National Park Service dock site permit (\$5 daily, \$40 per season) is required in order to stay at any of the Federal docks on Lake Chelan. This permit is available at the Chelan Ranger District and through several vendors on both the north and south shores of Lake Chelan.

TRAILS AND CAMPGROUNDS ON LAKE CHELAN

Boat service to the heavily forested and scenic areas at the head of the lake started in 1889. Currently, the Lady of the Lake boat service (operated by the Chelan Boat Company) provides access to some of the best hiking and backpacking trails in

the Cascade Range. There are Forest Service and National Park Service trails that range from 1 mile to 230 miles in length. Hikers can find trails offering all levels of difficulty among the 40 trailheads in the Chelan Valley.

In addition to the 17 boat-in campgrounds on Lake Chelan, there are also a number of "drive-to" campgrounds in the lower lake area. These campgrounds include Poison Springs, Antilon Lake, Grouse Mountain, Handy Springs, Junior Point, South Navarre, and Windy Camp.

Snowberry Bowl Campground, a "drive-to" fee site with amenities, pull-through trailer sites, tent pads, and a large group shelter is one of the newest campgrounds in the Chelan Ranger District.



LAKE CHELAN BOAT-IN CAMPGROUNDS

Safety Harbor, Graham Harbor and Corral Creek are small campgrounds located about half-way uplake tucked into steep rocky shorelines.

Deer Point and Mitchell Creek campgrounds are located on the north shore of Lake Chelan. Both are large, open campgrounds in shrub step habitat. Mitchell Creek has a shelter. Deer Point is one of the larger campgrounds and has a few scattered ponderosa pines.

Graham Harbor Creek and Big Creek campgrounds are closed due damage sustained from the 2004 Deep Harbor Fire.

Moore Point and Prince Creek campgrounds, also on the north shore, have trails that lead into the Lake Chelan-Sawtooth Wilderness. These campgrounds also provide access to the very popular Lakeshore Trail.

Lucerne is located on 30 acres of flat land at the mouth of Railroad Creek on the south shore of Lake Chelan. Ponderosa pine, Douglas fir and grand fir are the dominant tree species in this area. The area has a Forest Service Guard Station and docks, including the Holden access dock. Adjacent to Lucerne is the Getty property which is the location of the Lake Chelan Boat Club.

Refrigerator Harbor Campground is located adjacent to the Lucerne site. This campground has trails that lead up into the Glacier Peak Wilderness.

Domke Falls is best known for its beautiful waterfalls and is also located on the south shore of Lake Chelan.

Flick Creek, Manley Wham, and Weaver Point Campgrounds are all located in the upper lake area and are managed by the National Park Service.

Whether visiting the Chelan Ranger District by boat, by foot, or by motor vehicle, recreationists will all agree that it truly is one of the most unique places in the nation! Come and enjoy it with us. ■

A Unique Recreation Experience

LOUISE DAY



Rockhounds and Thunder Eggs

KIM LARNED



Photos courtesy of www.washington-state-rockhounding.info

ACCORDING TO ANCIENT NATIVE AMERICAN LEGEND... when the Thunder Spirits, living in the highest recesses of snowcapped Mount Hood and Mount Jefferson, became angry with one another, they would hurl masses of these spherical rocks at each other. The hostile gods obtained these weapons by stealing eggs from the Thunderbirds' nests, thus the source of the name "thunder eggs."

Not sure what a rockhound is? Rockhounding means different things to different people but, generally speaking, rockhounds are people with an unending interest in rocks and, for some, the forces that create them.

National Forest lands boast a wide variety of landscapes created by many natural events. Heat, ice, water and wind are just a few ways nature can create and shape the landscape. Rockhounds enjoy nature by hunting for and collecting rocks.

The Cle Elum Ranger District is a great place for rockhounds to spend hours looking for those potential treasures. It is a recreational activity that has been occurring for decades on national forest lands.

The Cle Elum Ranger District boasts a variety of rockhounding opportunities--agates, geodes (or thunder eggs) can be found at various locations across the district.

And what exactly is a thunder egg? A thunder egg is a rock structure, sometimes a nodule and sometimes a geode. It is a rock "egg" that may be filled with agate or crystal.

Most rockhounds think of thunder eggs as something to hunt for, a sort of scavenger hunt for those with a vision of the possibilities of what these unusual rocks may become. Some of these

treasures can be made into beautiful jewelry, ornaments or simply appreciated in the landscape in which they are found.

If you do choose to rockhound on the national forest here are some considerations to keep in mind:

- Fill in all holes as you dig.
- Dig in a way that will not damage vegetation or wildlife. Do not dig under or around trees.
- Collecting is for personal use only.
- Dig well away (200 feet) from any water source, wetland, spring or meadow.
- Please pack out all of your trash.
- In areas where previous users have left their holes open; please dig in a way that will fill in their holes. Chances are the previous rockhound missed some good stuff.

Rockhounding can be dangerous. Please be careful of cliffs, rolling rocks and mindful of others who may be recreating in the area. Stay on trails or other designated routes.

As with all types of recreation, a little is great, but too much or careless use can damage the resource and jeopardize access. A rockhound may take small amounts of rock from the national forest without a permit. You will need to obtain special permission if you wish to collect or remove large quantities of rocks, or if your activity requires extensive disturbance of the ground surface. ■

Early Season Use can be Damaging

KIM LARNED



These tire ruts across a meadow were caused by a vehicle driving off-road when conditions were wet. The damage to soil and vegetation will take years to correct.

The snow has stopped falling, there is a hint of warmth in the air, and a few courageous flowers are starting to poke out of the winter-soaked soil. Spring is upon us!

For many of us that means a switch from our favorite winter recreation activity into summer fun pastimes. It is difficult for those who love to be in the outdoors to take a break from it. But the land needs a chance to transform and harden, set roots, and for some animals, have young. The land is also ready for the transition to summer, but the change is much slower and happens with less urgency than some would like.

Forest lands are seeing more use all year round, even during the most fragile times--spring and fall months. Riding snowmobiles or driving vehicles on road and trail surfaces that have not hardened completely in the spring and fall causes a great deal of damage.

Erosion, water degradation, habitat destruction, damage to cultural sites, and conflicts between users can result when users are careless. The land may not be able to rehabilitate itself after someone takes a ride across a wet meadow, hillside, or road.

Meadows are particularly susceptible to damage from early and late season travel. Damage to fragile meadows and streams takes years to correct. Compaction of soil, damage to vegetation, and the introduction of noxious weeds can result from one careless entry.

Spring is a time for wildlife to rejuvenate, nest and birth. Snowmobiles or vehicles entering elk habitat during the spring can disturb cows during

the elk calving season. Animals are especially vulnerable in spring when the newborns are just arriving.

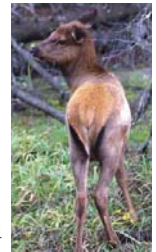
Forest Service roads can also be damaged by early season use. Early season driving on asphalt roads can break up the asphalt, causing extensive damage. Gravel roads can be rutted easily in spring and fall wet conditions. With declining budgets, road maintenance funds are limited and may not be available to repair damaged roads. Increased damage could result in restricted access in some areas.

Some things forest visitors can do to help prevent road and resource damage:

- Drive only on roads that are dry and hardened
- Don't drive on meadows or other fragile areas off your route
- Be prepared to choose another route if your preferred route is too wet
- Park your vehicle and walk to your destination if conditions are questionable
- Report damage, get license plate numbers and vehicle descriptions of those doing the damage
- Stay well away from known elk calving areas
- Call ahead and ask for current road conditions

If recreationists can skip an extra few weeks in the spring and fall to avoid traveling over soft national forest roadways and trails, the land will benefit and so will the users who will receive a higher quality experience.

Everybody can do something to help reduce damage to the land, streams, and wildlife and still have many fun-filled recreation experiences on the Cle Elum Ranger District. ■





The Entiat Experimental Forest (EEF) consists of three adjacent, 2-square mile catchments, McCrea, Burns, and Fox Creeks, in the Entiat River subbasin. The Entiat River lies in central Washington State on the eastern slope of the Cascade Mountain Range about 35 miles north of Wenatchee. Studies in the EEF were originally established in the late 1950s to examine effects of timber harvesting and road building on quantity, quality, and timing of streamflow. On August 24, 1970, following 10 years of calibration, the area was severely and uniformly burned as part of a 188-square mile, lightning-caused, stand replacing wildfire.



After the fire, two contour roads were constructed in McCrea and Burns catchments, dead trees were salvaged, grass and clover were seeded with nitrogen fertilizer by helicopter in Burns and McCrea, while Fox Creek remained an untreated experimental control. Subsequently, the primary research objectives for the EEF shifted to the study of the effects of a severe wildfire on streamflow quantity, quality, and timing, as well as effects on soils and vegetation recovery. These questions were examined until the cessation of data recording in 1977, producing a number of publications that remain important references today.



ONGOING RESEARCH

In 2003, the Pacific Northwest Research Station's Wenatchee Laboratory, working with Oregon State University, began re-analyzing this rich data record and re-instrumenting the catchments to take advantage of the rare opportunity to investigate recovery from severe wildfire, post-fire salvage logging, and rehabilitation treatments on water quantity and quality. Studies employ state-of-the-art methods, instrumentation, and modeling approaches.

Other studies have been added to the research portfolio to broaden its scope and relevance to managers. For example, spring and fall prescribed burning trials have been implemented in the last two years in cooperation with the Entiat Ranger District fire and silviculture personnel in nearby Preston and Fox Creek drainages. These examine the efficacy of using fire alone to thin pre-commercial age forest stands, reduce fuels, and add back structural complexity to large areas that were covered with trees of the same age following the fires of the 1970s. Likewise, studies are monitoring the effects of the timing of burns on the shrub and herb community, tree and crown density, surface fuels, height to live crown, and tree size and composition.



FUTURE WORK

Ongoing and future research includes analysis of water sources and aging, flow paths, and timing of water delivery. Improved understanding of catchment hydrology will enable managers to better detect important changes associated with current land management practices, including prescribed burning and road network management. Results will serve as a platform for virtual experiments simulating fire under various conditions, and real, on-the-ground management experiments in related areas. Ongoing studies will use several other gaged catchments in the Entiat River subbasin to form the basis for nested hydrologic monitoring at the subbasin scale, allowing results obtained in the Entiat Experimental Forest to be scaled up to the entire subbasin. Companion spring and fall burning studies are also planned for the well instrumented area to monitor the effects of burning with and without roads on streamflow quantity, quality, and timing. ■



Research on the Entiat Experimental Forest

Addressing Management Questions

RICK WOODSMITH, PAUL HESSBURG, DAVE PETERSON
PNW RESEARCH STATION, WENATCHEE

Natapoc Ridge... a Forest Restoration Project

SUSAN PETERSON



The photos above show landscape and close-up views of the results of a similar forest restoration project.

The Wenatchee River Ranger District is comprised of two ranger districts merged into one district encompassing 729,000 forested acres. This year, the Natapoc Ridge Restoration Project is the district's main project. It is located approximately 12 miles north of Leavenworth and west of the town of Plain.

The project objectives are to reduce the risk from wildfire, improve forest health and sustainability, and reassess road management on approximately 4,588 acres of national Forest lands within the 11,117 acres of the project boundary.

Why is this project important? First, the project is located in an area with potential for high fire impacts to nearby homes. Secondly, forests are constantly changing. The change affects ecosystems and may change the forests' sustainability by making them more prone to disease and fire.

In the Natapoc project area, fire exclusion and selective timber harvest in the past 100 years have dramatically changed the composition of the forest. Eastern Washington forests are characterized by dry conditions that are conducive to open stands of ponderosa pine and Douglas fir.

Fire exclusion alters forest composition by allowing survival of thin-barked tree species that don't tolerate fire. This results in increases in the number and density of trees per acre, and high amounts of burnable fuels.

Past timber harvest activities removed many of the fire resilient tree species such as ponderosa pines. These changes in vegetative composition have resulted in stand densities and fuel accumulations that are uncharacteristically high, thereby increasing the risk of large-scale wildfire. The number of trees susceptible or succumbing to disease or insect attack has also increased.

This proposed project identifies several methods to remedy this situation:

- Thinning roughly 3,000 acres of overstocked tree stands to improve tree vigor. Thinning would also remove smaller trees that fire can

climb like a ladder into the crowns of larger trees. It would favor widely spread desirable tree species such as ponderosa pine and Douglas fir.

- The project would utilize prescribed burns on approximately 640 acres. The goal is to reduce ladder fuels and accumulated surface fuels and complete some understory thinning.
- More extensive thinning to regenerate some areas impacted by insect and disease infestation.
- New tree plantations of desired species would be replanted.

Another objective of the project is to protect and enhance old growth forest habitat for the spotted owl and other wildlife species in the Deadhorse Late Successional Reserve (LSR) and Natapoc Managed Late Successional Areas (MLSA). LSR's are areas managed to improve or retain old-growth characteristics and serve as habitat for species that depend on this type of forest ecosystems. Managed Late Successional Areas are similar to LSR's but are found in locations that are drier, where fires are likely. "These special areas are being managed to avoid large fires and to retain their old growth conditions," said Vaughan Marable, District Ranger. "By reducing the risk of uncharacteristic stand replacement fire, insects, and disease in the Natapoc area, we hope to have healthier forests and safer communities."

The proposed project began as an Environmental Assessment (EA) and has developed into an Environmental Impact Statement (EIS). An EIS is used in conjunction with other analysis to plan actions and make decisions. The project may take up to 10 years for full implementation.

A draft EIS is scheduled for release in fall 2006, with a 45-day comment period before a final decision is made.

For more information on this project contact Steve Willet at (509)548-6977 ext 228 or visit the website at: www.fs.fed.us/r6/wenatchee ■

Stewardship Crew Improves Wilderness Conditions

LISA THERRELL



Some popular spots in the Alpine Lakes Wilderness are in better shape thanks to special funding in recognition of the Forest Service's 2005 centennial.

In recognition of its land stewardship role, the agency offered Centennial Grants to fund special projects. The Wenatchee River Ranger District, in partnership with the Student Conservation Association (SCA), received funding through one of these grants for a Wilderness Stewardship Crew.

This crew, consisting of four SCA volunteer interns, worked with a skilled Forest Service crew leader to stabilize and reduce existing wilderness impacts.

The crew installed check dams on eroding trails, closed off user-built trails, and planted rock "icebergs" in places to deter camping. These "icebergs" are large boulders buried so just the top portion of the rock sticks out of the ground.

With blood, sweat, and tears they pulled noxious weeds at 10 trailheads, and cleared Canada thistle from 30 acres within the wilderness. On

a trip through the Enchantments, southwest of Leavenworth, the crew rebuilt a series of rock cairns marking the main route, and hand dug new holes for primitive Wallowa toilets (a small wooden box type toilet with a lid).



The SCA interns learned a lot about preserving the wilderness environment and also enjoyed the rewards of working in the woods.

There is still a large backlog of similar work to be done in the wilderness. Fortunately, the Wilderness Stewardship Program will be in place again in 2006 with a grant provided by the Washington State Interagency Committee for Outdoor Recreation. ■

A Night Out... Evening Interpretive Programs

Enjoy Forest Service sponsored interpretive programs Saturday evenings during July and August at the outdoor amphitheater at Lake Wenatchee State Park. This year's line-up of entertainers includes folksinger Peter Blake, the Eclectic Cloggers, storyteller & folksinger Tom Rawson, and other cultural events. Programs begin at 8:30 p.m. and are suitable for all ages (with a suggested \$1.00 donation per person).

Directions: From Highway 2, drive 3½ miles north on Highway 207. Turn left on Cedar Brae Road and continue to the South Lake Wenatchee State Park. The amphitheater is on the right. ■



The idea for community-based forest planning and project prioritization is neither novel nor new. However, communities received unprecedented new incentives with the enactment of the Healthy Forests Restoration Act (HFRA) in 2003.

The HFRA provides communities with a tremendous opportunity to influence where and how federal agencies implement fuel reduction projects on federal lands. It also provides for distribution of additional federal funds for projects on non-federal lands. A Community Wildfire Protection Plan is the most effective way to take advantage of this opportunity.

Developing such a plan engages community members in discussion to clarify priorities for the protection of life, property, and critical infrastructure in the wildland-urban interface. The HFRA emphasizes the need for federal agencies to work collaboratively with communities in developing hazardous fuel reduction projects and it places priority on treatment areas identified by communities themselves.



Several wildland urban interface communities that share a boundary with the Okanogan and Wenatchee National Forests have prepared or are in the process of developing a Community Wildfire Protection Plan. Representatives of government agencies such as local fire districts, county fire marshals, sheriffs' offices, conservation districts, county commissioners, The Nature Conservancy, Washington State Department of Natural Resources, Bureau of Land Management, and the Forest Service are consulted for professional advice and technical expertise.

A close relationship between community members and local representatives of the various agencies has resulted in a deeper understanding of community expectations for public land management. Residents are also able to see how agencies with common protection responsibilities and goals often must operate under differing policies and guidelines, yet strive for interagency cooperation.

The long term result is expected to be less destructive wildfires and safer communities. ■

Community Wildfire Protection Planning

JIM BAILEY



The health of one of the state's largest herds of Rocky Mountain Elk is being studied cooperatively by the Forest Service and the Washington Department of Fish and Wildlife (WDFW). This collaborative study of the Yakima elk herd is in the second, and final, year of field data collection.

The WDFW has been collecting information on the physical condition of elk, monitoring elk movement, and habitat use through the use of radio collars on selected animals.

Information on physical condition was collected in the late fall as elk moved to their winter ranges, and again in the spring before the animals left the

winter range. By comparing these measurements the department hopes to assess animal health and determine what implications animal condition information might have for the management of the Yakima elk herd.

The Forest Service portion of the study involves assessing the condition of habitat. To gain insight into habitat condition, the Forest Service established 56 permanent macroplots, which are mostly located on the Naches Ranger District. A macroplot is 150 feet by 120 feet in size.

On each of these plots, plant species composition is identified and the amount of grazing or browsing of plants by wildlife and/or livestock is measured.

Included in each of the macroplots is a wire cage enclosure that prevents animals from utilizing the vegetation within the cage. Each caged area has a similar uncaged area associated with it, as a means of determining herbaceous plant productivity and utilization. Shrub productivity and utilization is also being determined on subplots within each larger macroplot.

Following the 2006 field season, the data from both studies will be compiled and analyzed to determine what, if any, management actions may be necessary to improve elk herd health, habitat condition, or both. Results of this study should be available within the next few years. ■



Photo by Heather Murphy

The Final Environmental Impact Statement (FEIS) for a proposed expansion of the White Pass Ski Area located on U.S. Highway 12 between Yakima and Packwood, Washington, is scheduled for completion this year. White Pass Ski Area operates under a Special Use Permit issued by the U.S. Forest Service, the permit is administered by the Naches Ranger District. It currently encompasses approximately 710 acres and the expansion would include up to an additional 767 acres. The four action alternatives include proposals for construction of as many as two new ski lifts and associated trails, a new mid-mountain lodge, and additional base area parking.

It is anticipated the FEIS will be published in early fall 2006. For detailed information on the project, visit our website at: www.fs.fed.us/r6/wenatchee/planning/white-pass/ or call the Naches Ranger District during normal business hours at (509) 653-1400. ■



Yakima Elk Herd and Habitat Study Update

PETER FORBES
AND
JODI LEINGANG

White Pass Expansion

RANDY SHEPARD

