



# Kanuti National Wildlife Refuge

*Winter 2008/2009*

## In This Issue

Refuge Cooperates in Moose Project.....1-2

Shorebird Findings Spark Research..... 3

Dragonfly Roadshow Takes Wing.....4

Did You Know.....5

Arctic Dragonfly..... 5

It's Good to Have Friends.....5

Science Camp a Wild Success .....6-7

Volunteers Go the Extra Mile.....8

Honoring Tradition.....8-9

Perspective From Field Camp.....9

Friends Wages War Against Weeds.....10

Bird Vetch - A Weed to Watch Out For.....11

What You Can Do.....11

Kanuti Goes Green with Hybrid.....12

Eco-Friendly Buildings Completed.....12

Energy Saving Tips .....13

Project Helps Keep Fire Out of Village.....13

Kanuti's New Conservation Plan.....14

Refuge Vision.....15

For More Information.....15

Kanuti's Staff.....15



Jack Reakoff/USFWS

*This cow was observed near the Koyukuk River shortly after being collared.*

## Refuge Cooperates in Groundbreaking Moose Telemetry Project

Kanuti Refuge, Gates of the Arctic National Park and Preserve, Bureau of Land Management and Alaska Department of Fish and Game worked together to radio-collar moose in the upper Koyukuk River valley for the first time. Fifty-eight moose (10 bulls and 48 cows) were fitted with radio collars March 13-18, 2008. None of the involved agencies had the wherewithal to conduct this project alone; only through partnering were resources sufficient

to complete such a large project. Collaring efforts were concentrated in two main areas: the Refuge and the Middle Fork Koyukuk River valley between Coldfoot and Wiseman. Moose are being radio-tracked at least once a month throughout the year. Five of the moose were equipped with GPS collars that are recording moose locations more frequently.

This project will provide important

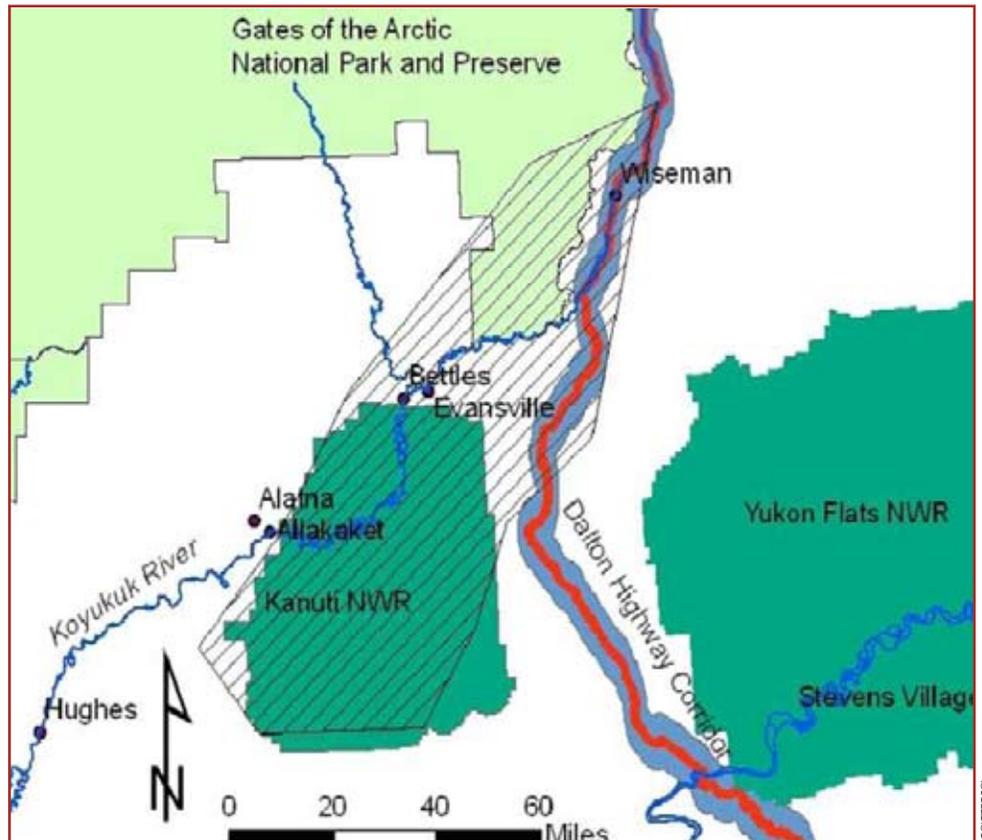
## Refuge Cooperates in Groundbreaking Moose Telemetry Project *(continued)*

information on moose movements and seasonal distribution. Refuge biologists want to learn about distribution of moose in burns and in river flood plains. National Park Service and BLM are particularly interested in determining the origin of moose that concentrate in the Middle Fork Koyukuk River valley during the winter. Moose congregate along the river when snow gets deep in the surrounding hills and mountains, but nobody knows where they are coming from. Collared cows will also help biologists locate animals during spring twinning surveys.

The proportion of cows that produce twin calves is used as an index of the population's nutritional status – a high proportion of twins indicates that moose are in good nutritional shape. Without radio-collars in this region of low moose density, it can be difficult to locate enough cows (about 50) to calculate twinning rates during the brief survey window. For further information contact refuge Supervisory Wildlife Biologist Lisa Saperstein at 907-456-0508 or Refuge Manager, Mike Spindler at 907-456-0331. 🐾



*Refuge Manager Mike Spindler collects a fecal sample from a captured moose.*



*General area where moose were radio-collared (cross-hatched area).*

## Shorebird Findings Spark Research

In Alaska, the term “spring-out” means spending spring at a remote site before the annual thaw of river ice. For the first time in 15 years, a four-person crew comprised of the Kanuti Refuge bird biologist and three volunteers “sprung out” at the Refuge’s remote administrative cabin at Kanuti Lake. Refuge staff wanted to document spring phenomena including breakup and bird migration.

The crew arrived at the cabin April 12, poised to witness the first migratory birds (geese and raptors), which arrived on April 21. A late spring with sub-freezing (often subzero) temperatures and late April snowfall seemed to delay most bird arrivals. Nevertheless, the crew’s three volunteers—all photographers (two professional, one amateur)—ventured afield and obtained excellent images of winter scenery, resident birds such as Great Gray Owl and Spruce Grouse, and mammals like muskrat, beaver, and vole-hunting red foxes!

Spring finally started to arrive in early May, with considerable changes observed in the lakes and rivers, and ever-increasing numbers and species of migratory birds. The biological crew supplemented their general reconnaissance work with more rigorous surveys for breeding large shorebirds on the tundra just south of the lake. The crew found unexpected concentrations of Whimbrels (a type of curlew), as well as fewer, but still notable numbers of Hudsonian Godwits. These two species are of particular interest due to gaps in our knowledge about their natural history. They breed in Alaska and winter in South America—some as far south as Chile or Argentina—but

their migratory pathway is poorly understood.

After returning to Fairbanks in late May, Kanuti Refuge bird biologist Chris Harwood called shorebird researchers at the U.S. Geological Survey (USGS) Alaska Science Center to inform them about the unexpected presence of Whimbrels and Hudsonian Godwits near Kanuti Lake. Having recently unraveled the incredible migration stories of Alaska’s other species of curlews (Bristle-thighed) and godwits (Marbled and Bar-tailed), USGS scientists were now poised to study Whimbrels and Hudsonian Godwits, but had yet to decide on an appropriate study area. Based on our spring observations, they suggested that Kanuti Lake might be a viable place to study these two species if sufficient numbers of birds could be confirmed. An additional

survey in mid-June (post-hatch time) near Kanuti Lake yielded just the kind of evidence USGS was looking for—even greater numbers of Whimbrels and Hudsonian Godwits were breeding there than had been suggested in the spring reconnaissance!

Plans for collaborative shorebird work at Kanuti Lake in June 2009 are now fully underway. After several years of studying far-flung curlews and godwits in highly remote places of Alaska with primitive camping conditions and serious logistical issues, USGS researcher, Dr. Robert Gill, is excited about the localized nature of Kanuti’s birds, as well as the excellent accommodations offered at the nearby cabin. USGS and Kanuti staff hope to uncover the migratory stories of two of the refuge’s more interesting bird species! 🐦



*A Hudsonian Godwit roosts on the melting ice of Kanuti Lake.*

## Dragonfly Road Show Takes Wing

Children and adults from Alaskan communities learned about dragonflies June 19-26 thanks to Kanuti Refuge staff and numerous partners and volunteers. John Hudson and Bob Armstrong, co-authors of the field guide “Dragonflies of Alaska” and the children’s book “Dragons in the Pond,” headlined the “dragonfly road show.” The purpose of their trip to interior Alaska was threefold: to teach the ecology of dragonflies and foster an appreciation of these beautiful insects; to collect dragonflies to increase our knowledge of species distribution; and to teach biologists to identify dragonflies so as to document species occurrence at their study sites. Kanuti Refuge and Fort Greely hold Alaska records for dragonfly species (20 each) but most

areas are not surveyed; it’s hoped that this project will enable others to document species.

Hudson and Armstrong spent two days in Fairbanks training biologists to collect and identify dragonflies. An evening talk at the University Museum drew 30 residents and tourists alike. The crowning event for Fairbanks was “Dragonfly Day” at Creamer’s Field, a popular bird watching area. Co-hosted by the non-profit group Friends of Creamer’s Field, about 300 people enjoyed dragonfly walks, displays about dragonflies and wetlands, children’s activities, and vendors selling dragonfly artwork. Three dragonfly-collecting walks attracted some 150 people. Numerous nets provided by the Refuge and Friends of Creamer’s

Field enabled participants to try their hand at catching dragonflies. By the end of the day five species of dragonflies and one species of damselfly had been caught. Dragonflies can be caught, carefully handled, and released unharmed, providing a unique opportunity for a close-up view of them.

After “Dragonfly Day” and the other Fairbanks events, Hudson and Armstrong drove south to Tok to teach identification skills to the staff of Tetlin Refuge, lead a dragonfly walk, and give a public presentation. They visited ponds en route, and during one stop captured a new species for Alaska – “Kennedy’s Emerald.”

From Tok, they headed back through Fairbanks to Coldfoot with Kanuti Refuge staff, stopping to collect additional dragonfly specimens. More than 80 people, mostly tourists, attended Hudson and Armstrong’s evening talks at the Arctic Interagency Visitor Center.

Kanuti Refuge’s first annual “Dragonfly Day” activities were wildly successful and plans are underway for next year’s event. Hudson calls interior Alaska “the frontier of dragonfly research” and hopes to return with Armstrong to continue this citizen-science effort to document dragonfly diversity and distribution. 🦋



Lisa Saperstein/USFWS

*Dragonfly expert, John Hudson, helps biologists identify a dragonfly during a Fairbanks training session.*

## Did You Know?

➤ Dragonflies can fly 35 mph and have thousands of facets (or lenses) in each of their compound eyes, allowing them to see in nearly every direction. This is why they are so hard to catch!

➤ All dragonflies are carnivorous. They eat mosquitoes, midges, flies, bees and butterflies.

➤ Birds aren't the only predator dragonflies have to watch out for. The carnivorous sundew plant is the Arctic's smallest dragonfly hunter! Using its sticky leaves as deadly weapons, the sundew plant can capture a dragonfly and digest

its body. That is one way these plants can survive living in nutrient-poor Alaska bogs.

➤ Dragonflies are born as swimmers. In the murky water world of wetlands they hunt using jet propulsion and speed to devour small fish and insects. Emergence into the world of air transforms the dragonfly from swimmer to life on the wing.

➤ Dragonflies are found worldwide and there are more than 5,000 described species. There are around 450 dragonfly species in the United States and over 30 species in Alaska.



Joanna Fox/USFWS

*A child gets a close-up view of a Four-spotted Skimmer, Alaska's state insect, during Dragonfly Day in Fairbanks.*

### Arctic Dragonfly

*Dragonfly, sitting there in the summer sun,  
where have you been with those all-seeing eyes of yours?  
Watching the sun sew circles into the heavens,  
what winds have lifted your wings above the willows,  
taking you to the next sandbar  
where I find you, quiet and still and beautiful?  
Wings so delicate, I hold my breath  
as I kneel down close to hear yours.*



*Your body is intricate, like clean crystal  
snowflakes resting on birch twigs in Arctic moonlight.  
Dragonfly, mysterious colorful little being,  
You sail through my summer dreams  
weaving your ancient poetry of light and sky  
into songs of warm glowing embers  
that carry my heart through winter, until,  
Dragonfly, you return once again with the sun.*

*-Anonymous*

## It's Good to Have Friends

“Friends of Alaska National Wildlife Refuges” is a non-profit, statewide organization that promotes the conservation of natural resources on all 16 of Alaska's National Wildlife Refuges, including the Kanuti National Wildlife Refuge. If you would like more information about the Friends group, please e-mail Sue Hazlett at <shazlett@hotmail.com>. 🐾



## Second Science Camp a Wild Success!

A few days of cold weather and rain did not dampen the spirits of the 13 students from four villages near Kanuti Refuge who attended the second annual Henshaw Creek Weir Science Camp. After a rainy start, campers spending the third week of July at the weir were rewarded with a sudden change to warm and sunny weather as they learned about fish ecology and the Refuge resources. Funded by the Fish and Wildlife Service and overseen by Tanana

Chiefs Conference (TCC), the weir is used to monitor numbers of chum and other species of salmon making their way upstream to spawn, and is an ideal setting for science education.

Staff from Kanuti Refuge, TCC, and the University of Alaska Fairbanks combined forces with a volunteer from Friends of Alaska National Wildlife Refuges (Friends) to provide a diverse array of learning experiences to students from the

remote villages of Allakaket, Alatna, Bettles and Evansville. The week-long camp included lessons about the weir, salmon life cycles, aquatic insects, fish identification and anatomy, stream ecology, stream physics, nature observation, Arctic animal adaptations, fishing, art, and plant identification. Students also learned about the Refuge, which is literally the back yard for the residents of the participating villages, who are the primary users of resources within the refuge for their subsistence activities.

Four long-time residents and elders from Allakaket, David and Kitty David, and Kenneth and Elsie Bergman, all of whom are very knowledgeable in Native ways, taught traditional subsistence skills. Participants learned to set fish nets, cut fish for drying and smoking, build a smoke rack without nails or ropes, mend fish nets with needles made out of willows, and traditional beading. The elders were able to bring about a deeper, more holistic meaning to each lesson the students tackled and their presence was truly enjoyed by everyone. Elders also told traditional stories around the campfire in the evenings, which was wildly popular and a favorite part of the day.

Last year's science camp, the first of its kind in the area, was attended by five students. Due to its initial success, the 2008 camp was opened to more than twice the number of students who attended last year's camp. Also, a day camp was held in Allakaket for students who did not attend the camp at the weir. Staff and volunteers from Kanuti Refuge, TCC, Alaska Department of Fish and Game, and the Friends group



*Students Salone Saunders and Carolyn Gray collect aquatic insects during a lesson about stream health and ecology.*

## Second Science Camp a Wild Success *(continued)*

provided lessons similar to those presented at the weir camp. The three-day event included a potluck dinner for the entire community of Allakaket, which was followed by a dessert social sponsored by the Friends group.

The two science camps provided opportunities for Kanuti Refuge staff and partners to provide positive, educational experiences to students and the residents of the villages nearest the Refuge while strengthening and forging new partnerships. “The magical part is that everyone wins,” said one of the Friends volunteers. Refuge staff are excited about the great success of this summer’s camps and are hoping to reach even more students during next year’s events. 🐾



*Kanuti Refuge Manager Mike Spindler teaches a topography lesson using sand for mountains.*

USFWS



*Henshaw Creek Weir Science Camp students and teachers proudly display their fish print art t-shirts.*

USFWS

## Volunteers go the Extra Mile!

This year, through the monumental efforts of an amazing 26 volunteers, numerous projects that could not

have otherwise been completed by our small staff were accomplished – and exceptionally well too! These

selfless individuals dedicated more than 2,900 hours to working on a wide variety of projects for Kanuti Refuge that included collecting biological data at remote field sites, writing reports, assisting with science camps, repairing boat motors, organizing digital libraries, controlling invasive plants, taking photographs and presenting interpretive programs to the public.



*Volunteers Erv Nichols and Sandra Noll provided interpretive programs at the Arctic Interagency Visitor Center; instilling in visitors an understanding, appreciation and connection to the Arctic, including nearby Arctic, Kanuti and Yukon Flats Refuges, and Gates of the Arctic National Park and Preserve.*

USFWS

The efforts of volunteers made all the difference in allowing us to achieve and surpass our refuge goals this year. If you are interested in volunteering at Kanuti Refuge, call us at (877) 220-1853. For information on volunteer opportunities at other Alaska refuges, visit <http://alaska.fws.gov/volunteers.htm>.

## Honoring Tradition: Sharing a Lifetime of Lessons

What do you learn when you subsist off the land for over half a century? Kitty and David David, who have spent their lives together in Allakaket raising a family and subsisting in harmony with nature, have learned lessons that can not be found in textbooks. The traditional knowledge and skills Kitty and David hold are extensive. They attended the first and second Henshaw Science Camps to share their knowledge and skills with students.

Traditional knowledge has always been central to Alaska Native life, but it's even more important now, says Kitty: "Today, kids have everything they need and more, and they don't realize it. I want them to know how



*David and Kitty help Henshaw Science Camp students bring their catch of chum salmon to shore on the Koyukuk River during a lesson on setting nets.*

USFWS

## Honoring Tradition: Sharing a Lifetime of Lessons *(continued)*

it used to be and to appreciate the things they have now.” The stories Kitty shared with students at science camp often ended in laughter, but the meaning she imparted resonated deeply on many levels. Kitty’s presence at the camp helped the students connect with their heritage and with traditional values on how to live a good life.

Like Kitty, David taught students traditional knowledge through stories, but also used his special gift for teaching students traditional skills such as building fish drying racks and carving net mending needles. When a student wanted to know why David was teaching traditional skills, David replied, “Knowing these things will help you live, will help you catch fish, feed your family and be happy.”

Elders such as Kitty and David, work ceaselessly to ensure that the knowledge and ways of their ancestors will not be forgotten. By honoring the past through teaching, Kitty and David are ensuring the survival of their culture and a bright future for the younger generation.



## Perspective From Field Camp



USFWS

*Biological Technician Rebecca Zulueta spent weeks in the field assisting staff with a wide variety of projects.*

Each summer Kanuti Refuge works on an amazing variety of projects, ranging from aerial moose surveys to bird surveys. For someone like me who is relatively new to the biological field, it’s a great opportunity to learn and develop skills and experience the true wilderness of Alaska.

Starting in June I assisted biologist Chris Harwood with bird surveys within the refuge. To perform these surveys, we were up by 2:00 am and tromping through various habitats of tussocks and spruce forests. We also spent some time on the tundra searching for breeding pairs of Whimbrels and Hudsonian Godwits near the refuge’s administrative cabin on Kanuti Lake.

At the beginning of July I started assisting refuge manager and pilot Mike Spindler with aerial surveys for geese and moose radio

telemetry. This meant at least two days of flying each month to track the moose, which also meant a very rough two days on my stomach considering I was a novice.

Also during July I assisted senior biologist Lisa Saperstein with vegetation surveys throughout the refuge. We would camp for about a week at each plot and hike every day to a new point to determine the plant species composition while noting any wildlife signs along the way. Although much of Kanuti is burned habitat, we were fortunate to have a beautiful plot of old growth forest to explore this year.

When August approached I was lucky enough to spend time in the mountains working at the Arctic Interagency Visitor’s Center in Coldfoot. Here I was able to learn much about the region and share my knowledge of the refuge with visitors from around the world who were traveling along the Dalton Highway. At the end of the month I wrapped up the field season by accompanying a National Park Service backcountry ranger on a hunting patrol in Gates of the Arctic National Park and Preserve. Hiking through the Brooks Range was an unforgettable experience. With little or no sign of human impact, I felt as though we were exploring the range for the first time.

My experience working with Kanuti NWR has proven to be tremendously rewarding and I am so grateful to have had the opportunity this summer to explore the Alaskan wilderness. 🏔️

## Friends Group Wages War Against Weeds

At its nearest point, the Kanuti Refuge lies just eight miles west of the Dalton Highway, the road that leads from Fairbanks north to Prudhoe Bay. At least six Koyukuk River tributaries cross the highway and later enter the Refuge. Kanuti Refuge staff and our cooperators are increasingly concerned that these waterways (especially Jim River, Fish Creek, Prospect Creek, and Bonanza Creek) could become routes for dispersal of invasive white sweetclover (*Melilotus alba*) into the refuge. This non-native plant readily invades open and disturbed areas and has become established in extensive areas along many roadsides and even some river gravel bars in interior, south-central and southeast Alaska. White sweetclover has rapidly colonized the Dalton Highway corridor near the Refuge, moving 120 miles northward between 2000 and 2007.

Since 2006, The Friends of National Wildlife Refuges (Friends) have cooperated annually with Kanuti



*A Friend pauses from pulling weeds to move road flags as the group progresses, helping assure their safety.*



*Friends Group members feel victorious after removing every flowering white sweetclover plant at river crossings between the Kanuti River and Coldfoot.*

Refuge, the Bureau of Land Management (BLM), the National Park Service, Alaska Department of Transportation, Alyeska Pipeline Service Company and others to control white sweetclover at key sites where it could easily disperse into the refuge. To the best of our knowledge, the Refuge currently is free of highly invasive non-native plants. To date, control efforts have focused primarily on manual pulling. This year crews of volunteer weed warriors continued removing plants manually, but expanded the effort to include using weed trimmers, with the goal of eliminating 2008 seed production. The expanded effort required that infested areas be visited twice during the growing season. The first effort was undertaken earlier than in previous years, to better target seedlings. By late July, two crews of 13 Friends members and agency staff successfully achieved their goal – removing all outlying flowering plants at river crossings between the Kanuti River and Coldfoot.

As a result of these annual weed pulling events, white sweetclover

infestations have been reduced at the target sites along the Dalton Highway. In addition, refuge staff conducted surveys along rivers downstream of the highway and within Kanuti Refuge. They report that the plant had not spread down drainages and into the Refuge. The war against invasive white sweetclover is not over; these dedicated partners plan to continue pulling the weed at river crossings annually to prevent its spread. Knowing that their labors are paying off is providing incentive to the effort to keep sweetclover out of pristine refuge lands.

This year BLM also started developing a formal weed management plan for the Dalton Management area, holding public meetings in communities that will be affected if white sweetclover colonizes habitat in their area. It is hoped that this plan will incorporate a large-scale integrated approach that may include potential use of herbicides and other methods for controlling non-native, invasive plants. 🐾

# Bird Vetch - A Weed to Watch Out For



M. Rasy, University of Alaska, Bugwood

*Bird vetch (Vicia cracca) in bloom.*

Bird vetch (*Vicia cracca*) is a non-native, invasive climbing plant that came to North America from Europe, where it is frequently used as a decorative flower in hedgerows. This perennial plant was introduced to Alaska as a potential forage crop almost 100 years ago, and is now

aggressively spreading along and climbing fences, and spreading into roadside vegetation, shrubbery and forested areas. Particularly alarming is its ability to invade areas that have not been disturbed and/or are low in soil nutrients. It also thrives following fire and in drought conditions.

Bird vetch is a member of the pea family. Its numerous branching and vine-like stems have small, coiling tendrils and alternate leaves with 8-10 pairs of narrow leaflets. The plant produces bluish-purple flowers from spring to late fall, which in turn produce inch-long, brown pods that contain seeds. Not only does the plant produce many seeds, but it also spreads by rhizomes (horizontally creeping stems that lie just beneath the soil). As with all non-native, invasive plants, early detection and rapid response are key in preventing infestations. Small patches can usually be controlled by hand-pulling

or cutting the plant at the base of the stem, but large infestations contain tangled mats of the plant that require pulling several times per season or even mowing with large equipment over the course of several years for effective control and removal.

To our best knowledge, bird vetch is not presently growing anywhere in Kanuti Refuge, although it has reached the Dalton Highway. If you see bird vetch in or near the Refuge, please make note of its location and the extent of the infestation, and contact us as soon as possible. For more information about bird vetch or other invasive plants, contact the University of Alaska Cooperative Extension Service, or download a pocket weed guide at [www.alaskainvasives.org](http://www.alaskainvasives.org). 🐾

## What You Can Do

There are many ways you can help in our fight against invasive species. One of the most important things you can do to prevent the introduction and spread of invasive species is to regularly clean your outdoor gear. The seeds of invasive plants can easily get transported in mud and dirt held in boots, tires, vehicles, and other outdoor equipment. You can also help by not releasing unwanted pets or dumping the contents of an unwanted aquarium into the wild.

To learn more, please visit the U.S. Fish & Wildlife Invasive Species website at <http://www.fws.gov/invasives/>. If you think you may have discovered an invasive species, please contact Kanuti National Wildlife Refuge at 1-877-220-1853. 🐾



M. Rasy, University of Alaska, Bugwood

*A bird vetch infestation spreads rapidly across this undisturbed forested area.*

## Kanuti Goes Green with Energy-Efficient Hybrid



USFWS

*This 4-wheel-drive hybrid vehicle will help Kanuti Refuge staff save gasoline, reduce carbon emissions, and safely negotiate city stop-and-go traffic at refuge headquarters in Fairbanks.*

Kanuti Refuge is doing its part to be environmentally responsible, reduce our carbon footprint, and conserve funding by reducing fuel use. In summer 2008, Kanuti Refuge

replaced a large truck with a hybrid compact utility vehicle. The hybrid will be used almost exclusively within Fairbanks, where it averages almost 30 miles per gallon and can travel

more than 500 miles on a single tank of gas! The green vehicle even boasts eco-friendly seat covers made of post-industrial plastics and fibers.

Kanuti Refuge takes its resource stewardship responsibilities seriously and works not just to comply with but to exceed environmental standards. In recent years, staff replaced all boat motors with more efficient and less polluting four-stroke outboards, installed solar energy systems at remote facilities and installed electrical sensors and timers to reduce energy consumption. Kanuti Refuge employees embrace Service Director Dale Hall's message to reduce our carbon footprint and we continue to seek ways to minimize the effects of our activities on the environment. 🐾

## New Environmentally Friendly Buildings Completed



USFWS

*New office and visitor information center in Bettles.*

Kanuti Refuge just moved into two new buildings: a bunkhouse and an office-visitor information center in Bettles. Both buildings were constructed this summer under a contract managed by the National Park Service (NPS). According to Brad Richie, the NPS architect who led the design team, both buildings

employ sustainable design and construction principles. They were designed around the principles of the Leadership in Energy and Environmental Design (LEED) Silver rating system developed by the U.S. Green Building Council, a non-profit organization dedicated to promoting sustainable building

design and construction. The building design and construction features which contribute to sustainability include energy efficient super-insulation, extensive natural lighting, superior thermal windows, high-recycled content materials (carpeting, insulation, etc.), photovoltaic solar panels, and use of local materials such as Alaska white spruce logs and siding, Alaska birch interior trim, and river rock from local or regional sources.

Thanks to the close cooperation between Kanuti Refuge and Gates of the Arctic National Park, the buildings are shared seamlessly by the park and refuge staff. Both staffs are eagerly looking forward to receiving visitors and cooperators in their new Bettles facilities! 🐾

## Energy Saving Tips That Will Save Money Too

Going green is easy. Here are four easy steps you can take today to reduce your carbon footprint and save \$. You'll also be helping ensure that the world we hand to the next generation is a greener one:

- Unplug your appliances while not in use. Most appliances still use power, even when turned off. Unplugging your appliances will reduce your energy consumption and your monthly power bill!

- Check vehicle tires for proper inflation. This can improve gas mileage and reduce your gasoline consumption. The appropriate air pressure is typically listed on the driver's side door, on the inside of the glove-compartment or in the vehicle manual.

- Travel wisely and carpool. Reduce the miles you travel by planning trips wisely and by combining trips. Bringing others along who also need to travel will further reduce gasoline consumption.

- Trade and share with friends. Use what you have wisely and consider trading or sharing goods that you don't use with others. Hold a trading event in your community to encourage wise consumption of goods. Limit purchases to needed items and consider lowering costs and consumption by purchasing community items. 🐾

## Project Helps Keep Fire Out of Village



USFWS

*Beattus Moses of Allakaket, acts as the "Firing Boss" during the prescribed burns, helping conduct a pile burn of removed materials near the Koyukuk River.*

The village of Evansville successfully completed a two-year hazardous fuels reduction project in June 2008, with help from Refuge fire management staff. As part of the national "Firewise" program, the Fish and Wildlife Service-funded project consisted of thinning hazardous black spruce stands around the community using expertise of a local fire crew. Three separate pile burns were conducted with the local volunteer fire department to dispose of slash accumulated during the two-year project. Burns were supervised by Refuge fire management staff on the open gravel bars of the Koyukuk River.

Nearly all structures in the village, including residences, the clinic, tribal office and volunteer fire department, received "Firewise" thinning treatment. A large fuels break was also created at the north end of the village where black spruce

stands once led directly onto the Kanuti Refuge. Most spruce were removed from this treatment leaving fire-resistant, healthy birch trees. An overgrown fire lane was re-treated, expanded, and cleared out to 75 feet, providing additional wildfire risk reduction. In total, more than 58 acres were treated on lands within and around Evansville.

This project opened a cooperative dialog between the village and the Refuge fire management staff into related topics including wildfire risk reduction priorities, fire management objectives, and fire education for the Evansville thinning crew, Bettles volunteer fire department, and the entire Bettles/Evansville community. 🐾

## Kanuti's New Conservation Plan

Kanuti Refuge recently completed its long-term management plan, also called a Comprehensive Conservation Plan (CCP). This plan will provide refuge staff with management guidance, including specific goals and objectives, for the next 15 years. The final plan represents the culmination of a four-year effort that included public involvement, consultations with stakeholders, an extensive peer-review of the biological program, writing and analysis, editing, and public review. The final record of decision to implement the plan was signed in August 2008 by the Service's Regional Director Tom Melius. In late fall 2008 a summary

of the plan will be published and distributed to all who participated in the process. Refuge Manager Mike Spindler said he "appreciates the involvement and participation in the planning process by both the local village public and stakeholders throughout Alaska. We view the public involvement portion of the planning process as a valuable 'pulse check' on the work that we are doing."

Each national wildlife refuge is required to have a CCP to ensure management actions and permitted activities fulfill the mission of the National Wildlife Refuge System and

the purposes for which the refuge was established. This plan provides a vision, goals, and objectives for future management of the refuge. It also ensures that subsistence and fish and wildlife oriented recreational opportunities continue to be available to the public.

The CCP provides specific guidance for dealing with two major issues identified during public scoping and review of the draft plan: (1) acceptance and integration of new management policies and guidelines into the Plan, and (2) conservation of the natural, unaltered character of the refuge. New management policies and guidelines are essentially the same for all of the refuges in this region, establishing a common framework for management.

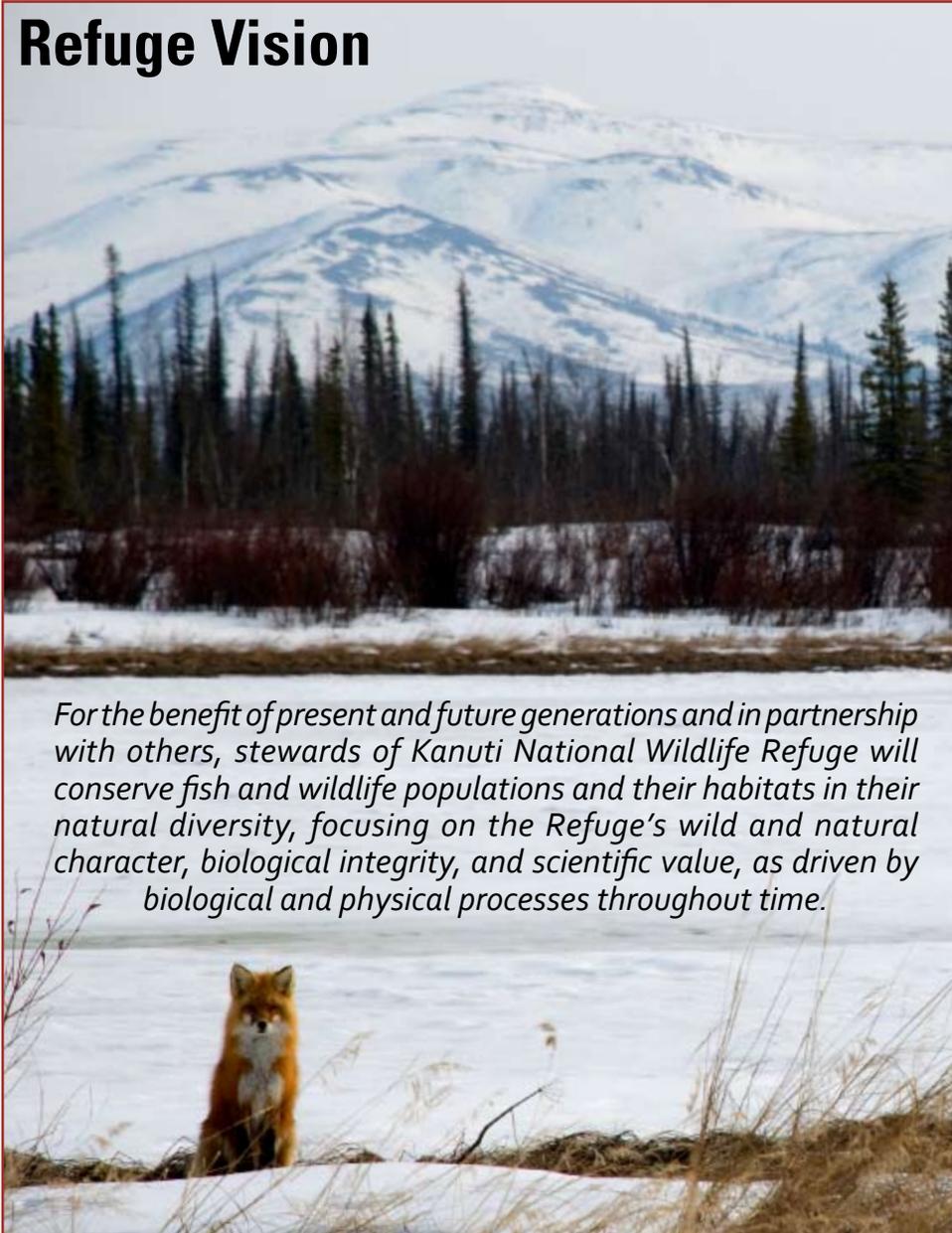
The management of Kanuti Refuge will generally continue to follow the same course of action that it has previously. It will strive to maintain the ecological integrity of the refuge with little evidence of human-caused change. Any such disturbances to resources resulting from public use, economic activities and facilities will be minimized. Finally, habitats will primarily be allowed to change and function through natural processes. You may view and download the Record of Decision and the Final Plan online at <http://alaska.fws.gov/nwr/planning/plans.htm>.



USFWS

*The Kanuti Kilolitna River ("Kk'oonootne Kk'eeyh Degheleetne" in Koyukon Athabascan) where it enters the refuge, epitomizes the fundamental qualities of wilderness. The refuge's adopted management strategy will promote conservation of the natural, unaltered character of the refuge.*

## Refuge Vision



*For the benefit of present and future generations and in partnership with others, stewards of Kanuti National Wildlife Refuge will conserve fish and wildlife populations and their habitats in their natural diversity, focusing on the Refuge's wild and natural character, biological integrity, and scientific value, as driven by biological and physical processes throughout time.*

*A red fox ("nohbaaye" in Koyukon Athabaskan) enjoys the warm sun during spring breakup in the Kanuti National Wildlife Refuge.*

Luke Smithwick/USFWS

## Kanuti Staff

- *Refuge Manager*  
Mike Spindler
- *Deputy Refuge Manager*  
Joanna Fox
- *Supervisory Wildlife Biologist*  
Lisa Saperstein
- *Wildlife Biologist (Birds)*  
Chris Harwood
- *Fire Management Officer*  
Chase Marshall
- *Fire Management Specialist*  
Sam Patten
- *Interpretive Park Ranger*  
Kristin Reakoff  
(Wiseman/Coldfoot)
- *Administrative Officer*  
Almeda Gaddis
- *Administrative Support Assistant*  
Lou Maloney
- *Clerk*  
Laurel Gale
- *Maintenance Worker*  
Doug Holton  
(Bettles)

## For More Information

To learn more about Kanuti National Wildlife Refuge, please visit our web site at <http://kanuti.fws.gov/> or call us toll-free at 1-877-220-1853. We also welcome e-mails. Our e-mail address is [kanuti\\_refuge@fws.gov](mailto:kanuti_refuge@fws.gov). This newsletter may be viewed at <http://kanuti.fws.gov/newsletters>.

htm>. To contact the editor of this newsletter with questions or comments, please call Kristin Reakoff at 907/678-2028 or e-mail her at [kristin\\_reakoff@fws.gov](mailto:kristin_reakoff@fws.gov).



**Happy Holidays From the Kanuti Staff!**

## U.S. Fish & Wildlife Service

**Kanuti National Wildlife Refuge**  
101 12th Ave. Rm 262  
Fairbanks, AK 99701-6237

Phone: 877/220-1853 or 907/456-0329

Fax: 907/456-0506

Web: <http://kanuti.fws.gov/>

e-mail: [kanuti\\_refuge@fws.gov](mailto:kanuti_refuge@fws.gov)

*A muskrat, or “benaale” in Koyukon Athabaskan, nibbles on decadent vegetation emerging through the snow. Muskrats are abundant in Kanuti National Wildlife Refuge.*

