



Natural Selections

Legacy Program Update

The 2009 Sustaining Military Readiness Conference site selection is announced: The Steering Group for the 2009 SMR Conference has finalized site selection for the second biannual Sustaining Military Readiness Conference. The conference will be held at the Sheraton Phoenix Downtown Hotel, from August 10-15, 2009.

Legacy Project Highlight of the Month

Legacy Project 07-307 Assessing the value of Department of Defense lands in Alaska to a declining species, the Rusty Blackbird

The Rusty Blackbird (*Euphagus carolinus*) has suffered one of the steepest declines of any bird species in North America with populations reduced by 90–98% since 1966. Despite this steep decline, the species' breeding habitat requirements and nesting ecology have remained poorly studied. Boreal wetlands on military lands in Alaska provide important breeding areas Rusty Blackbirds. Wetlands on military installations in south-central and interior Alaska offer an excellent opportunity for the study of Rusty Blackbirds. This project provides important information for military land managers to assess and resolve conflicts between this species and military operations.

The goals of the project were to evaluate the value of military installations in Alaska to breeding Rusty Blackbirds by determining habitats with high breeding occurrence, nest abundance, and reproductive success. Additionally, we wished to determine the incidence of disease, parasites, and contaminants within the population.

Following established protocols, we conducted surveys for Rusty Blackbirds, searched for and monitored nests and captured birds for color-marking, and blood and feather sampling from early May until the end of July, 2007. We also collected habitat information at nest and non-nest sites after the completion of the breeding
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In The News

Army hosts Field Trip for Legacy Sponsored Workshop on Plant Conservation

By Michelle Mansker
Army Garrison Hawaii Natural Resource Manager

On Sunday March 2, Army Garrison Hawaii Natural Resource Staff (NRS) took 16 individuals attending the Center for Plant Conservation (CPC) workshop held in Honolulu March 3 to 8 on an exciting tour of their Kahanahaiki Management Unit. The Army in Hawaii is responsible for managing over 100 endangered species, including the State flower of Hawaii. The Natural Resource Program spends over \$8 million a year on on-the-ground management and will have a crew of 120 professional biologists on board at full staffing. The Kahanahaiki Management Unit lies between 1,600-2,400 feet elevation, nestled in the Waianae Mountain above Makua Military Reservation. Army Natural Resource Staff have been managing this site for over ten years to protect one endangered snail species, one endangered bird

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Training

NEW! Bat Conservation and Management Workshops – 2008: Several dates and states. Bat Conservation International (BCI) offers a series of comprehensive, introductory field workshops to train serious students of bat conservation in current research and management techniques for the study of bats. Following an intensive 6-day, 5-night agenda, BCI biologists and professional colleagues will present a combination of lectures and discussions, field trips to view bat habitat resources and hands-on training to catch and identify bats. Learn species identification, netting, radio-tracking, night-vision observation and habitat assessment while working in extraordinary settings. Two Arizona Workshop sessions: May 20-25 and May 25-30, 2008. Each session limited to 16 people. Departure city: Tucson, AZ. Cost: \$1,395 One California Workshop session: July 19-24, 2008. Limited to 20 people. Departure city: Medford, OR. Cost: \$1,395. For additional information, registration forms and scholarship applications, visit <http://www.batcon.org>

Riparian Zone Ecology Restoration/Management: June 23-27, 2008, in Phoenix, AZ. This course addresses planning and management issues that pertain to riparian (streamside) ecosystems in a variety of ecological and geographical settings. Emphasis is placed on the ecology, restoration and stewardship of riparian habitats associated with Civil Works projects and activities. Students will receive instruction on the functions and ecological importance of riparian zones, conservation needs, and potential impacts resulting from various land use practices, restoration and management techniques that can be applied to maintain or improve riparian systems. For more details visit <http://pdsc.usace.army.mil/CourseListDetail.aspx?CtrlNbr=281>.

Migratory Bird Conservation: A Trust Responsibility: April 8-11, 2008, at Ft. Carson, CO. This course is designed to give participants a working knowledge of the legal and conservation implications of the MBTA, with special attention to the responsibilities of the Fish and Wildlife Service and the Department of Defense for migratory bird conservation. Partnerships, resources and initiatives which address migratory bird conservation will be discussed in detail, providing participants an excellent overview of how they can further implement migratory bird conservation. Special topics for this course will include Sikes Act, BASH, Executive Order MOU, and the Department of Defense Incidental Take authorization. To Register or for registration questions: Send an application to Rebecca Haynes by FAX to 703/358-2272. Contact for questions on the course content: Chris Eberly, Department of Defense Partners in Flight at ceberly@dodpif.org Phone: 540-349-9662.

Conservation Law Enforcement Workshop: April 15-18, 2008, at the National Training Center in Phoenix, AZ. The DoD Legacy Resource Management Program has funded a project to develop a DoD Conservation Law Enforcement course. This is a three and a half day course that uses a series of practical exercises and scenarios for managers and senior Law enforcement officers to demonstrate and apply knowledge of: Authority and Jurisdiction; Principles of Federal Law Enforcement; Tort and Liability; Federal Criminal Laws and Enforcement; DoD Law Enforcement Policy; Use of Force; Managing Critical Incidents and related stress; Investigations; Law Enforcement Planning. Target Audience: DoD Conservation Law Enforcement Officers and Line Managers who supervise Conservation Law Enforcement Officers or Special Agents. Participants must attend with his/her counterpart law enforcement officer (only 15 CLEO pairs available – max 30 attendees). You may register for the course on the CECOS website, visit: <https://www.npdc.navy.mil/csfe/cecos/>



Announcements and Events of Interest

NEW! 3rd Annual National Environmental Studies and Sciences Summit: May 22-24, 2008 Jonesboro, Arkansas. The National Council for Science and the Environment invites you to attend the 3rd Annual National Environmental Studies and Sciences Summit in Jonesboro, Arkansas at Arkansas State University from 22-24 May 2008. <http://evs.astate.edu/summit2008.htm> The Summit is an opportunity for exchange of interdisciplinary scholarship, teaching methods, and general networking. It is also an opportunity to learn how you can participate in the newly forming Association for Environmental Studies and Sciences (AESS) and a new interdisciplinary environmental studies and sciences journal.

CALL FOR PAPERS! 35th Natural Areas Conference: October 14-17, 2008 at the Doubletree Hotel in Nashville, Tennessee. The 2008 Natural Areas Conference will be a joint conference of the Natural Areas Association (NAA) and the National Association of Exotic Pest Plant Councils (NAEPPC). The conference will kick-off the 30th anniversary celebration of the NAA, and will be an inaugural national conference for NAEPPC. The conference will focus on ecological management themes with an emphasis on invasive exotic species and the effects of climate change. The NAEPPC will bring its invasive species expertise to the conference and the two organizations will provide synergy in organizing an outstanding event. The plenary and concurrent sessions will address the conference theme "Tuning into a Changing Climate and Biological Invasion." Field trips and workshops will provide training opportunities for participants. Join us for an informative and rewarding experience. Call for papers deadline April 22, 2008. For details visit <http://www.naturalarea.org/08Conference>.

64th Annual Northeast Fish and Wildlife Conference, April 27 - 30, 2008 at the Marriott Seaview Resort Galloway, NJ. Presentations will be made in the following subject areas: Wildlife, The Impacts of Roads on Wildlife, Inland Fisheries (Freshwater, Diadromous, Fish Culture Health), Marine Fisheries, Conservation Law Enforcement, and Outreach. For more information visit <http://www.neafwa.org>.

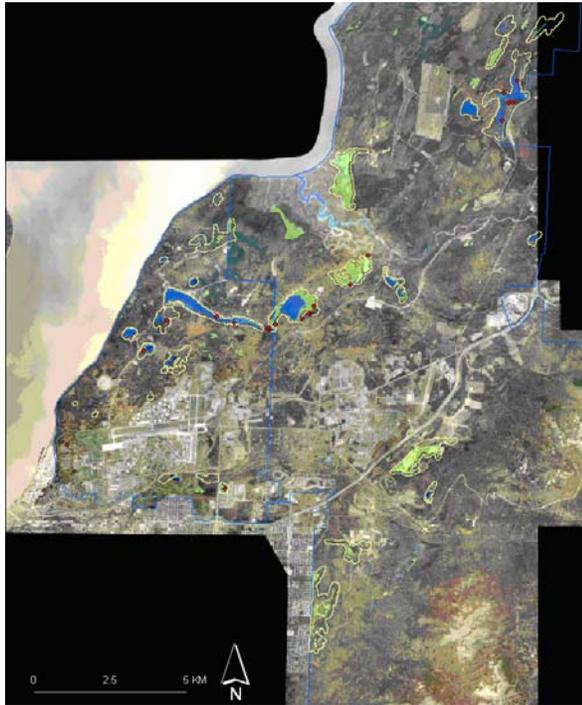
National Mitigation & Ecosystem Banking Conference: May 6-9, 2008, at the Hyatt Regency Hotel in Jacksonville, Florida. Learn from & network with the nearly 400 attendees the conference draws, offering perspectives from bankers, regulators, and users. Participate in several workshops covering: Stream Banking, a Primer on Banking issues, as well as Field trips, Regulator, Banker & User Forums and Interactive sessions on banker, regulator and user perspectives. For details visit <http://www.mitigationbankingconference.com/>



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season. Locations of surveyed areas, nest sites and habitat information were integrated into a Geographic Information System (GIS) and data analysis was conducted to determine habitat occupancy, important factors in nesting locations and to calculate reproductive success.

This study provides important new information on the breeding ecology of a severely declining species. Through this better understanding we will be able to more precisely define the needs of Rusty Blackbirds breeding in Alaska. This information permits military land and operations managers to better assess potential impacts and address conflicts. From a conservation perspective, most of the information gathered in this study is new, providing vital information on the breeding ecology of the species and a point of comparison for future studies in other parts of the species' range.



Example of GIS coverage of Rusty Blackbird nest sites (red dots) on Elmendorf Air Force Base and Fort Richardson Alaska. The GIS coverages created during this study will be provided for the use of the military

During May, June and July of 2007 we completed a very successful first field season, conducting surveys for Rusty Blackbirds on Elmendorf Air Force Base and Fort Richardson near Anchorage, and the Tanana Flats Training Area of Fort Wainwright near Fairbanks. We found and monitored 53 nests (21 at Anchorage, 32 at Fairbanks) and sampled blood and feathers from 16 individual Rusty Blackbirds. We collected vegetation data from all nests and conducted analysis on habitat important for nesting. We found that all military sites provided important wetland habitats for Rusty Blackbirds in terms of high incidence of breeding, high rates of nest survival, and a low incidence of disease. Shallow water habitats provide birds with opportunities to forage for large aquatic invertebrates such as dragonfly larvae. Nest sites were generally found in dense patches of willows and black spruce close to water and such habitat provided high rates of nest survival. Finally, we have acquired a second year of funding through Legacy. Further years of study will help us determine the degree of inter-annual variability and permit us to address additional questions regarding the ecology of Rusty Blackbirds.

Plant Conservation Workshop, continued from page 1

species, and nine endangered plant species. The day began with a hike up the ridge-line to the management unit. Along the way the attendees were able to see what the Hawaii staff terms a “snail jail”. The native *Achatinella* genus as a whole is endangered because rodents and non-native cannibal snails prey on the species. In order to keep the snails safe, the Army builds enclosures to keep the bad guys out. The enclosures include a salt trough to keep the cannibals from crawling up the walls into the fence and just in case they get past that, an electrically charged wire to zap them should they reach the top! Attendees were also shown numerous outplanting sites which roused lively discussions regarding how to protect these much imperiled species from all the different threats. The day was a great team building experience for everyone attending the CPC class and got their brains ready for an intensive week of training in plant conservation.



Achatinella mustelina, residents of the “snail jail”



Army Garrison Hawaii’s “snail jail”

The Center for Plant Conservation, with botanists nationwide, offered the DoD Legacy Program Sponsored workshop covering key conservation topics. Participants received pragmatic tips, information resources, direct contact with experts in the classroom, and an opportunity to get questions answered by experts in the field. The workshop was well received by the many participants that span backgrounds in several fields.



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Did You Know?

Can you tell a frog from a toad? –There are some basic differences between frogs and toads, here are a few: Frogs need to live near water, have smooth, moist skin that makes them look “slimy”, have a narrow body, have higher, rounder, bulgier eyes, have longer hind legs, take long high jumps, and have many predators. Toads do not need to live near water to survive, have rough, dry, bumpy skin, have a wider body, have lower, football shaped eyes, have shorter, less powerful hind legs and will run or take small hops rather than jump. Toads do not have many predators. Toad’s skin lets out a bitter taste and smell that burns the eyes and nostrils of its predators, much like a skunk does. And, neither frogs nor toads, will give you warts! That is just a myth.

More on frogs!

Frogs belong to a group of animals called amphibians. Amphibian means two-lives. Frogs begin their lives in the water as eggs and then tadpoles and when they are fully developed they live on land. Scientists believe that there are more than 4,000 different kinds of amphibians on Earth. Toads, newts, salamanders and caecilians (blind worms) are also members of the amphibian group.

Frogs are cold-blooded which means that their bodies are the same temperature as the air or water around them. When they are cold they will lay in the sun to warm up and when they get too warm they will go into the water to cool their bodies off.

Did you know that a group of frogs is called an ‘army’ and a group of toads is called a ‘knot’? Frogs don’t drink water they absorb it through their skin. Frog bones form a ring when the frog is hibernating, just like trees do. Scientists can use these rings to figure out the age of a frog.

Scientists have found frogs fossils that date back to the Jurassic period over 140 million years ago. Frogs are found all over the world, and in every climate, except Antarctica. They can be found near any, and every, body of fresh water but prefer ponds, lakes, and marshes, because the water doesn’t move very fast. Frogs cannot live in the sea or any salt water.

There are frogs that chirp, others can whistle, croak, ribbit, peep, cluck, bark and grunt. They have a small sac in their throats that vibrates the air as they slowly let it out. When male frogs are ready to mate they will ‘call’ out to the female frogs. Each different species of frog has their own special sound and that is the sound that the same species of female frog will answer to. Some frogs are so loud they can be heard a mile away! After they meet, they find a suitable spot to mate and lay their eggs. The male frog will hug the female from behind and as she lays eggs, usually in the water, the male will fertilize them. After that the eggs are on their own, to survive and become tadpoles. There are a few species of frogs that will look after their babies, but not many.



The Florida bog frog (*Rana okaloosae*) can be found at Eglin AFB.

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