



Refuge Biology Bulletin

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New Refuge Biology Bulletin launched

Wondering what the refuge biologists are up to these days? How is biology changing and improving on our stations? This issue launches a new newsletter that combines refuge biology news from USFWS Region 3 and Region 5. The Biological Monitoring & Database Team (BMT) works in

both regions; in the past the BMT issued a quarterly BMT Bulletin. This Bulletin replaces the BMT Bulletin and includes more information about refuge biology in both Regions, including news from the Regional Refuge Biologists and the Land Management Research and Demonstration Biologists. We're light on

news from Region 5 this time as we're still in transition. But, look for more news from Region 5 in the next issue. We plan to issue the newsletter 3-4 times a year. If you have news items that you want included in the next Bulletin, send them to your Regional Refuge Biologist by December 10, 2009.

Biological Monitoring Team:

- Check out the BMT Website: <http://www.fws.gov/bmt>
- New Fact Sheet on adaptive management.
- Need consultation or a workshop to address a thorny management problem? Consult your RRB. New Fact Sheet describes the process.
- BMT Website has papers & reports authored by R3 & R5 biologists.

Regional Biologists –Who Does What?

Who does what when it comes to regional refuge biology in R3 and R5? Here is a brief description of regional biology roles and expertise.

Regional Refuge Biologists (RRBs). These biologists have overall responsibility for the quality and focus of the biology program in each Region. The RRB's are generally your first point of contact for questions about refuge biology in each Region.

Land Management Research and Demonstration Biologists (LMRD). These biologists test new habitat management techniques and help others learn

about cutting edge habitat management techniques.

Biological Monitoring & Database Team (BMT). The Joint R3/R5 Team was initiated in 2005 to support natural resources monitoring and adaptive management efforts in both Regions and nationally. The BMT works under the supervision of the RRB's.

Region 3 Division of Natural Resources

- Pat Heglund, RRB
- Soch Lor, Asst. RRB
- Pauline Drobney, LMRD
- BMT

Region 5

- Jan Taylor, RRB north
- Hal Laskowski, RRB south
- Jennifer Casey, Biologist
- Susan Adamowicz, LMRD
- BMT

Biological Monitoring & Database Team (BMT)

- Hal Laskowski, Team Leader
- Jennifer Casey, Biologist (R5)
- Soch Lor, Biologist (R3)
- Melinda Knutson, Biologist
- Todd Sutherland, IT Specialist
- Callie Helgeson, Admin Tech. (R3)

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R3 –Funded Network Proposals (Pat Heglund)

“One concern expressed by biologists... was lack of funds dedicated to biology.”

At the 2006 NWRS – R3 Biology Workshop in La Crosse, WI and again at the 2008 Workshop in Moline, IL, one concern expressed by biologists was the lack of funds dedicated to biology. In April 2008, I received a

budget from our Chief, Nita Fuller, that provided funds for Networks to apply for various network related projects. This budget arrived fairly late in the year, but I think you all did a pretty good

job of quickly identifying a need and working together to come up with a proposal. I received at least one proposal from all 4 networks and those that were selected for funding are listed below:

Eastern Broadleaf Forest Network (Network Leader: Jason Lewis)

The Eastern Broadleaf Forest Network requested \$30K to be used to establish an invasive plant management team. To start this off, Cypress Creek and Crab Orchard NWRs were scheduled to have Integrated Pest Management (IPM) Plans developed by JF New. These plans will incorporate existing

invasive plant inventory data and address best management practices (BMP) for each pest plant identified. In addition, these IPMs will serve as a template for other network refuges to use to develop their own IPM. The remaining funds were used to purchase six (6) Trimble Nomad 800 LC

mobile mapping units, ESRI ArcPad software, and field supplies (e.g., sprayers, chemical, PPE). These acquisitions will directly benefit each refuge within the network by providing a foundation to establish an Invasive Plant Management Strike Team.

Big River Biology Network (Network Leader: Kevin Lowry)

The Big River Biology Network asked for \$30K for revision of the Biological Database will include search capabilities and legacy survey information and provide for a Biological Science Technician who will enter the data. Sharing resources and having historical data updated

and stored electronically will be an efficient and safe way to save, download, and transfer imperative information. This database will be invaluable to our network as well as our region. Duties and responsibilities will be entering information such as title of study, year of study,

contact information of author, etc. The selected individual will be required to travel to different stations within the network for a period of time to be determined. Each station within the network will prioritize data they wish to have entered, as time and money may limit data entry.

Regional Biologists – Who Does What? (continued)

Some regional biology staff have two roles; Soch Lor is the assistant RRB in R3 and works on projects that fall under the BMT umbrella. Hal is an R5 RRB and the Team Leader of the BMT.

Pat, Soch, Melinda, Todd, and Callie are stationed at

the USGS Upper Midwest Environmental Sciences Center in La Crosse, WI.

Hal is stationed at Prime Hook NWR in Milton, DE; Jan at Great Bay NWR in Newington, NH; and Jennifer at Lake Umbagog, NWR in Errol, NH.

Pauline Drobney is the LMRD Biologist at Neal Smith NWR in Prairie City, IA, specializing in prairie & savanna ecology. Susan Adamowicz is the LMRD Biologist at Rachel Carson NWR in Wells, ME, with expertise in salt marsh ecology.



Great Lakes Biology Network (Network Leader: Wayne Brininger)

The Great Lakes Network requested \$10K for an assessment of ecoregional land cover patterns for refuges of the Great Lakes Biology Network. The purpose of this work is to enhance the prior work of Scott et al. (2004) by providing all refuges in the Network with a broad, ecoregional context for refuge-specific planning and management by using existing spatial data regarding land cover, ownerships, soils, and disturbances. Geographically broad-scale analyses are important because several ecological patterns only become obvious at broader scales and because biological diversity must be considered at the

broadest scales. Alterations to the geographic distribution, abundance, structure, and composition of land covers are implicated in the declines of many wildlife species. Knowledge of the existing geographic distribution of land covers provides a first cut approximation for the prioritization of conservation and restoration actions. For example, Scott et al. (2004) provided an assessment of the distribution of land covers among National Wildlife Refuges of the Lower 48 states. However, that assessment was at much broader scales than individual refuges. Landscape metrics provide a means of

quantifying important landscape attributes and lend themselves to informing land management decisions. Scott, J.M., T. Loveland, R. Gergely, J. Strittholt and N. Staus. 2004. *National Wildlife Refuge System: ecological context and integrity. Natural Resources Journal 4:1041-1066.* An additional \$5K was provided to the Division of Conservation Planning for the purchase of an ESRI platform site license that any station can use via a check-in/check-out process. For more information on what this can do for you, contact: Wayne Brininger at Tamarac NWR or Mary Balogh in the R3 Regional Office.



Prairie Biology Network (Network Leader: Karen Viste-Sparkman)

The Prairie Network proposed that they support completion of the database called the Species-Habitat Requirement Information Management Program (SHRIMP). This application is being developed by the USGS – Fort Collins Science Center for FWS field stations for use in HMP development. Once the

database is completed, Kim Bousquet of Big Stone NWR has offered to work with Region 6 and Region 3 biologist's to populate the database. What is SHRIMP? SHRIMP summarizes data from entered research activities (journal articles, government reports, dissertations and theses) and extracts meaningful data for wildlife refuge

managers and field biologists. There are 177 different measures (habitat parameters) in 7 categories that can be recorded in SHRIMP. Each measurement is made at a specific habitat study area; each record in the database contains habitat parameters for a single species from a single journal article or other reference source.

"SHRIMP summarizes data from research activities."

R3 – Call for New Network Proposals (Pat Heglund)

Even though we are unsure of our funding for FY09, we are going ahead and asking for FY09 Network Proposals. We will operate under the assumption that each

Network can apply for up to 30K. Network proposals are due to Pat Heglund (Patricia_Heglund@fws.gov) by **15 December 2008!** The proposal

format has been sent to each network leader.

Refuge Publications:

These publications, authored by Refuge staff, have been added to the archive on the BMT website. Congratulations to staff with new publications! Send new publications authored by Refuge staff to Melinda Knutson; she'll add them to the archive.

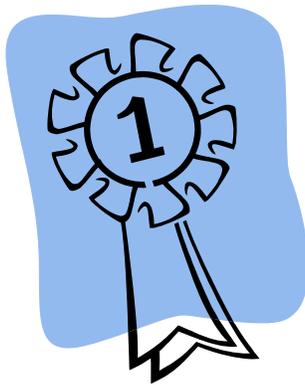
Drobyshev, I., P. C. Goebel, D. M. Hix, R. G. Corace, III, and M. E.

Semko-Duncan. 2008. Pre- and post-European settlement fire history of red pine dominated forest ecosystems of Seney National Wildlife Refuge, Upper Michigan. *Canadian Journal of Forest Research* 38:2497-2514.

Griffin, A. D., F. E. Durbian, and R. L. Bell. 2007. *Elaphe vulpina* (Western Foxsnake). *Herpetological Review* 38.

206-207.

Shaffer, J. A., G. A. Knutson, R. E. Martin, and J. S. Brice. 2007. Pattern and potential causes of White-faced Ibis, *Plegadis chihi*, establishment in the northern prairie and parkland region of North America. *Canadian Field-Naturalist* 121:46-57.



Prairie Reconstruction and Thistle Suppression Research

Funding for 2009 and 2010 was obtained via Challenge Cost Share, USGS Northern Prairie Research Center, and in-kind contributions by involved NWR field stations to continue

researching the relationship between planting techniques (drill vs. broadcast, different seed prescriptions, and spring vs. fall planting) and Canada thistle control. USGS Northern

Prairie Research Center, Fergus Falls WMD, Litchfield WMD, Morris WMD, and Neal Smith NWR are cooperating in this on-going research effort. Contact: Pauline Drobney.

R3 Call for Nominations for 2008 Biologist of the Year (Pat Heglund)

"The R3 Biologist of the Year annual award recognizes professional excellence and outstanding achievement."

This annual award recognizes professional excellence and outstanding achievement of an individual within the Region 3 Biological Program for 2008. The award also highlights the dedication and commitment of the individual to the National Wildlife Refuge System mission, goals and

objectives. This individual exemplifies the superior leadership qualities desired in the U. S. Fish & Wildlife Service and conservation community. Eligible Nominee's: This award is open to all refuge program biologists within Region 3 including refuge biologists, private lands biologists, foresters, etc. The award for this first

year will be presented at the Regional Office in February 2009 and recognized at the 2010 NWR Biology Workshop. Nominations are due to Pat Heglund (Patricia_Heglund@fws.gov) by **15 December 2008!**

R3 LMRD Website Coming Soon (Pauline Drobney)

A LMRD website with links to prairie and savanna research, management information, and HMP development information is in the works! Stay

tuned for future information on how to access it. I am trying to develop a list of all prairie and savanna research papers generated by R3

NWR stations/programs. Please send references to such papers for me for inclusion on the website.

"We encourage everyone to consider writing something about your own program, your network, Region, or your take on a National issue."



Biologists Write Articles for Refuge Update (Pat Heglund)

Members of the BMT, RRB, LMRD, and field stations were asked to prepare short articles on Strategic Habitat Conservation for the July/August Refuge Update. Check them out at:

<http://www.fws.gov/refuges/refugeUpdate/pdfs/ref>

Up_JulyAug_2008.pdf

Rich King of Necedah NWR wrote an article on our Biology Networks for Inside Region 3! Take a look at:
<http://www.fws.gov/midwest/InsideR3/documents/July2008.pdf>.

These were all really

great contributions. We encourage every one of you to consider writing a piece, whether it is something about your own program, your network, our Region, or your take on a National issue. Congratulations to these authors!

BMT Update (Melinda Knutson)

Thorny Resource Management Problems? Consult your Regional Refuge Biologist! A new Fact Sheet describes the process for requesting a consultation or workshop to address your problem. See the BMT website for more info.

Refuge biologists from R3 and R5 will participate in a Panel Discussion on Adaptive Management at the upcoming annual meeting of the The Wildlife Society in November 2008. They will speak about their experiences with adaptive

management projects on their stations. A new BMT Fact Sheet describes the adaptive management projects ongoing in R3 and R5. See the BMT website for more info.

Refuge Cooperative Research Program – Reed Canary Grass Project

Refuges in Regions 3 and 6 completed the first full season of field work in a cooperative, 3-year, Reed Canary Grass (RCG) Adaptive Management study. Flood waters in Region 3 affected most study units and caused delays in herbicide treatment and the addition of haying to the mix of potential

management practices. Lead investigators and field staff agreed to delay seeding one year in order to complete another season of herbicide treatments. Seed bank studies continue at University of Florida, along analysis of seed rain caught by seed traps on forest study units. Field visits were conducted by lead investi-

"gator" Dr. Carrie Reinhardt Adams and graduate student Julie Sorenson, both of University of Florida, and Dr. Susan Galatowitsch, University of Minnesota. BMT is providing important funding support and botanical expertise (Erin Hoy) to the project. Contact: eric_nelson@fws.gov

R3 Statistical Support for Stations

This is a reminder to R3 field stations that Soch and Pat have a small contract with statisticians at the USGS Northern Prairie Wildlife Research Center and they are

willing to work with you to get some of your data analyzed. Please let me know if you have data that you would like analyzed and we can talk

about the best approach to getting the work done (email: Patricia_Heglund@fws.gov; Phone: 608-781-6338).

REFUGE BIOLOGY BULLETIN

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BMT Website

<http://www.fws.gov/bmt>



R3 – Neal Smith NWR Research Program (Pauline Drobney)

The following tallgrass prairie or savanna ecological restoration projects are in progress or will be completed in FY 2008. Several publications are pending.

Interactions between Bison, Elk, and Plant Communities in an Ongoing Tallgrass Prairie Reconstruction Effort. Barbara W. Kagima and W. Sue Fairbanks; Iowa State University, Ames, Iowa.

Carbon sequestration on a chronosequence of prairie plantings at Neal Smith NWR. Cynthia Cambardella, Mark Tomer, Keith Schilling, Tom Isenhardt, and Pauline Drobney.

Temporal effects on soil carbon dynamics in newly established prairies. Jose Guzman and Mahdi Al-Kaisi; Iowa State University.

Temporal shifts in avian diversity and community

structure through stages of restoration of a tallgrass prairie, Neal Smith National Wildlife Refuge. Brian F.M. Olechnowski, Diane M. Debinski, Pauline Drobney, Karen Viste-Sparkman, and William T. Reed.

Can prairies help reduce the impact of invasive insects? Matt O'Neal, Iowa State University.

Terrestrial arthropod indicators of biotic integrity for prairie ecosystems. Jessica M. Orlofske, Wayne J. Ohnesorg, and Diane Debinski, Iowa State University.

An assessment of riparian land-use and channel condition impacts on streambank eroding lengths and recession rates in Walnut Creek. Jason Palmer, Iowa Department of Natural Resources, Des Moines, Iowa.

The effects of varying seeding rates of *Bouteloua curtipendula* and mowing on native plant establishment in a new prairie reconstruction. Ryan Welch, Daryl Smith, and Dave Williams, University of Northern Iowa, Cedar Falls, Iowa.

Vegetation structure and plant distributions in drilled and broadcast grassland reconstructions. Kathryn A. Yurkonis, Brian J. Wilsey, Kirk A. Moloney, and Pauline Drobney.

Learning and teaching with experimental watersheds: evaluation of ecosystem services in mixed annual-perennial agroecosystems. Asbjornsen, et al.

R3 – HMP Development (Pauline Drobney)

Many stations are striving to develop or to begin development of HMPs. I have heard from some stations with similar goals and objectives who wish to team up to work on

HMP development together. Do you fit in this category? Let me know. I will help you contact partner stations and assist in getting started on the HMP development process.