

Biological Monitoring Team Bulletin. February 2008

This is an update on projects of the Biological Monitoring Team, FWS Refuges, Regions 3 and 5.

Note: Region 3 is changing the contractor who maintains the BMT's intranet website. Therefore, we were unable to update the website with the new info below. When this issue is resolved, we'll update and add the documents referred to in the Bulletin on the BMT website. In the meantime, the contact persons for each item below are listed; please contact them directly for documents or other resources. BMT website:

https://intranet.fws.gov/Region3/ScienceExcellenceandLandscapeConservation/bio_monitoring.html

Marsh Birds

Protocols. Soch Lor is working on a Marsh Bird Inventory and Monitoring Plan on National Wildlife Refuges and she hopes to have a completed draft for review by field biologists and statisticians prior to this field season. Courtney Conway has recently informed Jennifer Casey and Soch that the field protocol revisions should be completed in late January and it will go out to reviewers prior to distribution to field stations in time for the 2008 field season.

Database. The NWRs Marsh Bird Monitoring Database was released to the public last June and field stations with survey data should have entered their data into this database. Historical data previously sent to Courtney Conway were also imported into this new database by the Patuxent staff. Field stations with data should access the database and review their data for errors.

Training for refuge staff to use the database will be conducted online this Spring using internet training software. An announcement identifying training dates will be forthcoming to refuges. Contact Socheata_Lor@fws.gov or Jennifer_Casey@fws.gov if you have questions.

Training. There wasn't enough demand to justify holding Marsh Bird Monitoring training workshops this year, but these may resume in 2009. Contact Socheata_Lor@fws.gov with questions.

Land Birds

Protocol. Melinda Knutson is revising the passerine monitoring protocol in time for the FY2008 field season. Reviews of the draft protocol were solicited last summer; many thanks to those of you who sent comments on the protocol! The purpose of the protocol is to provide a standardized tool for inventories and monitoring of breeding passerine birds at field stations. The protocol includes sampling designs tailored for different objectives and allows estimation of how many birds were present, but not detected during the surveys. Please contact Melinda if you need assistance in selecting a sampling design and establishing points for your passerine monitoring for the 2008 field season.

Database. All stations monitoring land birds with point counts should enter their data into the USGS Bird Point Count Database (<http://www.pwrc.usgs.gov/point/>). If you need assistance, please contact Todd Sutherland (R3) or Jennifer Casey (R5). The following online trainings for new users of the database are scheduled. To learn more about using the Point Count Database, please contact Todd Sutherland to register for one of the following scheduled two hour online training sessions:

April 9th @ 9:00 AM Central (10:00 AM Eastern)

May 21st @ 9:00 AM Central (10:00 AM Eastern)

NOTE: You must register at least one week before the training session.

Training. Melinda is working with Dr. Bob Howe at the University of Wisconsin, Green Bay to explore whether it is feasible for refuges to train & certify bird observers in bird identification (sight & sound) over the internet. View the prototype website at:

<http://www.uwgb.edu/birds/certification/index-1.htm> . The Wisconsin DNR and the National Park Service are also collaborators with Dr. Howe. Training bird observers to conduct point counts is an issue that needs more attention in the future and Melinda plans to work on this aspect of bird monitoring once the protocol is finalized. Refuges in Bird Conservation Regions 12 & 23 (see map on website) can test the website now!

Water levels

Database. The Service Water & Impoundment Monitoring (SWIM) database is available for use by field stations. Visit the BMT Web Page to download the SWIM database and "User Guide". If you need assistance, please contact Todd Sutherland. See below for scheduled training dates.

Training. If you haven't started using the SWIM database, please contact Todd Sutherland to register for one of the following scheduled two hour online training sessions:

February 20th @ 9:00 AM Central (10:00 AM Eastern)

March 5th @ 9:00 AM Central (10:00 AM Eastern)

NOTE: You must register at least one week before the training session.

NEW! Waterbirds (waterfowl, shorebirds, wading birds). BMT staff met with Region 4 South Atlantic Migratory Bird Initiative (SAMBI), Region 5 Migratory Bird Program, and R9 Migratory bird staff at Patuxent, MD to discuss expansion of the SAMBI waterfowl and shorebird monitoring program to refuges in Region 3 and 5. The BMT conducted a survey of refuges in R3, R4 and R5 to identify their waterbird monitoring needs, uses of the data, need for monitoring protocols, and standard databases for storage and analysis of the data. Results of this survey have been posted on the BMT website. A workshop was held at NCTC in January to identify waterbird management decisions and information needs to support those decisions at the three landscape scales: Refuge, Region, and Flyway. Participants at the workshop included staff from refuges, Regional Offices, USGS, and Manomet Bird Observatory. Workshop results will be provided to all refuges for comments and the revised document will be used as a planning framework to develop a waterbird monitoring program. Please contact Hal Laskowski for more information.

NEW! Biological Seminars. The Regional Biological Programs of Region 3 and 5 are initiating internet based Biological Seminars in an effort to inform refuge biologists and managers of timely issues and provide access to experts on specific biological topics. The Seminars will use on-line internet presentation software and conference calling as a way to bring information to field stations without the time and monetary costs of travel. We anticipate most Seminars to last about 2 hours, the first hour being a presentation with the second hour available for questions and discussions. In order to identify the topics of most importance to refuges, we are in the process of querying refuge biologists and managers through email and an online questionnaire. Please contact Jennifer Casey for more information or to provide ideas for Seminar topics.

Adaptive Management Workshops

Refuges have been working hard to organize workshops focused on specific management problems. These problems were submitted to the Regional Office last April; the problems were ranked, and workshops were planned for the highest priority issues. The workshops use a structured decision making process to set up a framework for adaptive management, including monitoring activities. Each workshop has a facilitator, a modeler, and an adaptive management expert (usually from USGS), as well as experts on the topic itself; 15-30 people, including refuge staff and invited

experts have participated in each workshop. Melinda Knutson & Clint Moore (USGS adaptive management expert) helped refuges to set up the workshops.

Refuge staff who participated in the workshops will have the opportunity to share their thoughts and experiences with adaptive management during a Panel Discussion at the Wildlife Society Annual Meeting (November 2008 in Miami, FL). In addition, Melinda is writing a handbook about how to organize adaptive management workshops; the handbook will cover lessons learned and recommendations for how to improve the workshops in the future. The following are brief descriptions of workshops that have been held or are scheduled.

Fire & Salt Marsh Management; Blackwater NWR (R5); 23-24 Oct 2007 and 29-30 April 2008. Dixie Birch and Laura Mitchell organized two workshops to set up a framework for monitoring different fire frequency treatments at Blackwater NWR. Salt marshes at the refuge have been managed with fire for decades and the refuge desires to evaluate the effects of different burn frequencies on vegetation, birds, and changes in open water and elevation. The first workshop established objectives, reviewed established treatments, and ranked monitoring metrics. The second workshop will complete details needed for implementing the framework.

Grassland Management; Morris WMD (R3 & R6); 14-15 Nov 2007. Sara Vacek & a planning team organized a grassland management workshop for participants from FWS Regions 3 & 6. The workshop built upon several years of pilot monitoring by several wetland management districts and the Nature Conservancy. The workshop focused on building an adaptive management framework for managing remnant prairies. After the workshop, USGS announced that Dr. Terry Shaffer & collaborators were awarded a research grant to work with refuges in R3 and R5 to adaptively manage grasslands. The workshop provided an opportunity for collaborators in this project to discuss grassland management and set the stage for a larger effort.

Managing Islands for Seabird Nesting - Maine Coastal Is. NWR (R5); 27-28 Nov 2007. Linda Welch & Sara Williams organized a workshop to help them manage islands for nesting seabirds. The workshop explored ways to improve vegetation monitoring on intensively managed islands and how management techniques they have learned could be applied to islands that are not currently under management. A follow-up meeting with USGS consultants Bill Kendall & Clint Moore, and Eric Lonsdorf (modeler with Lincoln Park Zoo) was held in February. Linda & Sara face a difficult problem because of the logistics of employing different management techniques on coastal islands. The refuge has a huge responsibility in managing islands where many rare seabirds nest in the face of severe predation pressure from gulls and competition for food.

Shrubland Management; Parker River NWR (R5); 9-10 Jan 2008. Nancy Pau, Kate O'Brien, Suzanne Paton, and Stephanie Koch organized a workshop to help them learn more about managing shrublands efficiently in the face of a host of invasive species. They were able to agree upon objectives, monitoring metrics, and management options, depending upon the initial state of the system (grass, shrub, or forest), with the help of their expert workshop participants.

Sediment Excavation in Wetland Restoration; Rydell NWR (R3 & R6); 29-30 Jan 2008. Lori Stevenson and a planning team organized a workshop to set up an adaptive management framework for evaluating the use of sediment excavation as a tool for restoring wetlands in the Prairie Pothole

region. One station in Region 6 also participated. The workshop helped them plan and structure monitoring to evaluate the success of their wetland restorations. They also are designing pre-screening tools that will help them decide which sites to enter into their adaptive management project and which ones to handle via their usual strategies. They want to understand better when sediment excavation should be part of the restoration process.

Managing Temporary Wetlands; Windom WMD (R3); 11-12 March 2008. Mark Vaniman and a planning team are organizing a workshop to improve the management of temporary wetlands using targeted grazing, haying, fire, and other vegetation control methods on priority waterfowl production areas.

National Wildlife Refuge Cooperative Research Program (RCRP)
Multi-refuge Adaptive Management Studies

USGS Funds Three New Projects Under the RCRP. USGS has funded three new adaptive management research proposals under the RCRP. Salt marsh integrity, grassland management, and climate change were the three topics selected. Some refuges in R3 and R5 will be working with USGS scientists from Patuxent WRC and Northern Prairie WRC to address salt marsh integrity and grassland management on refuges starting this spring. Each project is funded for three years at about \$125K per year. Contact Pat Heglund or Hal Laskowski for more info.

Cattail Fire Study. Biologist Lindsey Landowski and biological technician Warren Handke completed a busy successful 2007 field season for the multi-refuge Cattail Fire Study. Five impoundments were burned either during the cattail growing season or during the dormant season. A 2007 progress report for the Cattail Fire Study was completed and submitted to USGS and will be sent to Refuges in mid-February. A conference call will be scheduled with Refuge study participants in March to discuss results and plans for the upcoming 2008 field season. Please contact Lindsey Landowski or Soch Lor for more info.

Impoundment Management Study. Refuges within R3 and R5 completed the Fall 2007 field season of the impoundment study. Refuges are now submitting data to USGS Principal Investigators who are beginning data analysis. There is one additional field season for the study, being the spring waterfowl migration in 2008. At the conclusion of this last field season the study will be complete. A workshop will be planned with refuge participants to share information learned and disseminate study results. Contact Hal Laskowski for more info.

Reed Canary Grass Study. Region 3 Refuges participating in the Reed Canary Grass multi-refuge study completed their first field season this past fall. The Refuges, including Squaw Creek, Swan Lake, Port Louisa, Upper Miss. La Crosse District, Upper Miss. McGregor District and Upper Miss. Winona District, spent late summer and early fall selecting and marking suitable study sites, setting up photo points for each study plot, and conducting a comprehensive floristic survey of each study plot. A majority of the participating Refuges even had the opportunity to get a jump on next year's field work by installing ground water monitoring wells, staff gauges, and collecting soil samples. Spring field data collection efforts for the study will be initiated in April. Contact Frank Durbian for more info.

Canada Thistle Suppression Study. Four R3 stations are participating in a thistle suppression study as a part of the prairie and savanna Land Management and Demonstration Program. Stations include Morris WMD, Fergus Falls WMD, Litchfield WMD, all in Minnesota, and Neal Smith NWR in Iowa. USGS researcher Diane Larson, of Northern Prairie Research Center is providing leadership on this project. Four levels of prairie diversity in seed mixes, spring vs. dormant planting, and drill vs. broadcast seeding are being tested relative to success of Canada thistle populations. Plantings were sufficiently mature in 2007, the third growing season for the plantings, to include more intensive biodiversity monitoring. The research team is eager to take a look at the results of data analysis this year, as it is likely to yield some interesting results. A long-term commitment to this project is being made by all involved. Contact Pauline Drobney for more info.

NEW! Salt Marsh Ecological Integrity Index. Refuges in R5, as well as R1 and R2, will be working with USGS staff to develop an ecological integrity index for salt marsh communities. The index will be used to evaluate the quality of refuge salt marshes, identify significant perturbations that impact the marshes and have an effect on the endemic wildlife that depend on these communities. The index will also be used to track changes as a result of refuge restoration activities or how global warming is changing the marshes. A structured decision making workshop will be conducted by USGS to begin identifying priority index metrics. Six refuges in R5 will collect pilot data this year, prior to expanding the effort to other refuges and Regions. Contact Susan Adamowicz, Janith Taylor, or Hal Laskowski for more information.

Refuge publications. Please send a *.pdf of any publications authored by refuge staff to Melinda Knutson and we'll post them on the BMT website. These publications have been added to the list:

Corace, R. G., B. Lundrigan, and P. Myers. 2006. Nest site habitat and prey use of a breeding pair of Great Gray Owls in the Upper Peninsula of Michigan. *The Passenger Pigeon* 68:353-360.

Corace, R. G., D. L. McCormick, and V. Cavaliere. 2006. Population growth parameters of a reintroduced Trumpeter Swan flock, Seney National Wildlife Refuge, Michigan, USA (1991-2004). *Waterbirds* 29:38-42.

Goebel, P. C., T. C. Wyse, and R. G. Corace. 2005. Determining reference ecosystem conditions for disturbed landscapes within the context of contemporary resource management issues. *Journal of forestry* Oct/Nov:351-356.

Heitmeyer, M. E., and K. Westphall. 2007. An evaluation of ecosystem restoration and management options for the Calhoun and Gilbert Lake Divisions of Two Rivers National Wildlife Refuge. Gaylord Memorial Laboratory and Mark Twain National Wildlife Refuge Complex, Quincy, IL. <http://www.fws.gov/midwest/TwoRivers/calhoun.html>
http://www.fws.gov/midwest/TwoRivers/gilbert_lake.html

Potter, B. A., G. J. Soulliere, D. N. Ewert, M. G. Knutson, W. E. Thogmartin, J. S. Castrale, and M. J. Roell. 2007. Upper Mississippi River and Great Lakes Region Joint Venture Landbird Habitat Conservation Strategy. U.S. Fish and Wildlife Service, Fort Snelling, MN. 124 pp. (http://www.uppermissgreatlakesjv.org/docs/UMRGLR_JV_LandbirdHCS.pdf)

Resources of interest

All Taxa Biodiversity Inventory (ATBI). The All Taxa Biodiversity Inventory (ATBI) Alliance is a group of people engaged in organizing National and State parks, preserves, recreation areas, and monuments involved in the discovery of the living organisms inhabiting their boundaries. This growing association of reserves is working towards an umbrella alliance to serve cooperative interests in: science, education, stewardship, funding, data management, and other issues related to biodiversity inventories. (<http://www.atbialliance.org/>)

Anderson, D. R. 2008. *Model based inference in the life sciences: a primer on evidence*. Springer, New York, NY. This is an entry level book, short (184 pp), soft cover, and inexpensive (\$39). It is written for graduate students and professionals that are new to the subject. The book contains relatively little mathematics, proofs, derivations; instead, the emphasis is on science and science philosophy. A few examples are given. Most chapters end with a Remarks section and Exercises.

Common Birds in Decline. Last month the National Audubon Society released "Common Birds in Decline," a report which combines results of the 40 years of the Audubon Christmas Bird Count (CBC) and the USGS-backed Breeding Bird Survey (BBS) to provide a snapshot of the state of some of North America's "common" birds. The report was a collaborative effort, with input from state NAS offices and a select group of Important Bird Areas (IBA) coordinators. "Common Birds in Decline" presents a distressing picture of what is happening to some of our most familiar birds. The review and its associated outreach activities are intended to build public awareness over the fate of such common species as Northern Pintail, Greater Scaup, Northern Bobwhite, Common Tern, Eastern Meadowlark, and Evening Grosbeak - all species which were found to have experienced nationwide population declines of greater than 70 percent over four decades. Details of "Common Birds in Decline" along with information on the methodology used can be found online at: <http://stateofthebirds.audubon.org/cbid/>

Dennison, W. C., T. R. Lookingbill, T. J. Carruthers, J. M. Hawkey, and S. L. Carter. 2007. An eye-opening approach to developing and communicating integrated environmental assessments. *Frontiers in Ecology and the Environment* 5:307-314.

Kunz, T. H., E. B. Arnett, W. P. Erickson, A. R. Hoar, G. D. Johnson, R. P. Larkin, M. D. Strickland, R. W. Thresher, and M. D. Tuttle. 2007. Ecological impacts of wind energy development on bats: questions, research needs, and hypotheses. *Frontiers in Ecology and the Environment* 5:307-314.

Northeast Coordinated Bird Monitoring website. <http://www.nebirdmonitor.org/> The Northeast Coordinated Bird Monitoring Partnership is a cooperative effort to align and strengthen bird monitoring programs in the Northeast. State, federal, and non-governmental organizations have teamed up to develop a coordinated approach to monitoring avian abundance, distribution, and demographics in the thirteen states of US Fish and Wildlife Service Region 5 (CT, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VA, VT, WV). This initiative will help build the fundamental basis for science-based bird conservation in the Northeast, while providing a model for coordinated monitoring in other regions.

Pollinator Information Resources. A new NBII website has current information about pollinators, such as honeybees, and the recent colony collapse disorder that has the agriculture industry worried. (<http://pollinators.nbii.gov/>)

Resource Selection website. Ryan Nielson has developed a web site devoted to resource selection by animals (www.ResourceSelectionByAnimals.com). This website is a free source of information and contains lists of books, computer software, workshop and seminar announcements, and a searchable bibliography.

Salafsky, N., R. Margoluis, and K. H. Redford. 2001. Adaptive Management: A Tool for Conservation Practitioners. Biodiversity Support Program. (http://www.fosonline.org/Site_Docs/AdaptiveManagementTool.pdf)

Upper Mississippi River and Great Lakes Joint Venture website:

<http://www.uppermissgreatlakesjv.org/> Conservation Plans for all major bird groups and an all-bird plan that summarizes the major recommendations are now available. Melinda Knutson participated in writing the Landbird Plan. At 260 million acres (104 million ha) the Upper Mississippi River and Great Lakes is one of the largest and most diverse JV regions in the U. S. The UMRGL JV administrative region has been unchanged since 1998, encompassing all or portions of Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, and Wisconsin.

U.S. Fish and Wildlife Service Biological Monitoring Team Contact Information

updated 2/8/08

Soch Lor	UMESC	(608)781-6390	(608)738-8950	(608)790-4648	(608)783-6066	Socheata_Lor@FWS.gov
Todd Sutherland		(608)781-6263	(608)738-8273	(608)526-4668		Todd_Sutherland@FWS.gov
Melinda Knutson		(608)781-6339	(608)738-2342	(608)781-9343		Melinda_Knutson@FWS.gov
Lindsey Landowski		(608)781-6347*	(608)738-1131	(920)284-7311		Lindsey_Landowski@FWS.gov
Jennifer Casey	Lake Umbagog NWR	(603)482-3415 Ext. 22	N/A	(207)533-2022	(603)482-3308	Jennifer_Casey@FWS.gov
Hal Laskowski	Prime Hook NWR	(302)684-4028	N/A	(410)253-9143 cell	(302)684-8504	harold_laskowski@fws.gov

*To contact Lindsey:
Dial 1-866-327-8877 (Sorenson Video Relay), follow automated prompts, request for VP# (608) 781-6347