

## Minutes

### 2012 Poweshiek Skipperling Regional Update Conference Call

March 6, 2012



The minutes below represent the collective views and opinions of the experts who participated in the March 6, 2012 conference call or who submitted information in advance. The views expressed in this document don't necessarily represent the views of any one participant or organization. The conference call was led by the Nature Conservancy of Canada, Manitoba Region, and the minutes were summarized from audio recording and written notes by Lisa Bergen.

### **Acknowledgements**

We would like to extend a huge thank you to all of the individuals and organizations that participated in the regional update conference call.

Nature Conservancy of Canada's (NCC) Poweshiek Skipperling conservation efforts are supported by Manitoba Conservation & Water Stewardship's Endangered Species & Biodiversity Conservation Fund, and grants to NCC from Environment Canada and the Province of Manitoba.

This call would not have been possible without the volunteer efforts of the University of Manitoba's Lisa Bergen, whose logistical support was critical to the organizing of the call and the compilation of the minutes.

## **Abstract**

This document represents the minutes of the Poweshiek Skipperling Working Group's 2012 regional update conference call. The conference call was set up in response to last year's in-person workshop that took place in Winnipeg, Manitoba, whereby the need to keep communication open and accessible across all jurisdictions to monitor the status of the Poweshiek Skipperling was stressed. The objective of this conference call was to recapitulate the outcomes of the 2011 workshop in Winnipeg, Manitoba, to summarize survey results and other conservation initiatives undertaken in 2011, highlight planned 2012 activities and generate roundtable discussion. Participants summarized survey efforts, results and other recent conservation initiatives. Erik Runquist with the Minnesota Zoo will be investigating the possibility of another in-person workshop in autumn 2012 to bring together Poweshiek Skipperling experts.

## **Suggested Citation**

Poweshiek Skipperling Working Group 2012. Minutes from the Poweshiek Skipperling Regional Update Conference Call, March 6, 2012. Edited by L. Bergen. Nature Conservancy of Canada, Winnipeg, Manitoba.

## Agenda

- 9:00 am Goals of the Call, Acknowledgements – Cary Hamel
- 9:05 am Brief recap of the outcomes of the March 2011 workshop in Winnipeg (minutes: [http://www.poweshiekskipper.org/Final\\_POSK\\_Workshop\\_2011\[1\].pdf](http://www.poweshiekskipper.org/Final_POSK_Workshop_2011[1].pdf))
- 9:10 am Reports on National Government Initiatives
- United States
    - o Phil Delphey, other national reps
    - o U.S. range-wide GIS database development update – Elise Rosengren, University of Minnesota
  - Canada
    - o Marie-Christine Belair, other national reps
- 9:40 am Representatives from each region
- Each region please provide:
    - o Introduction to regional reps on the call
    - o Summary of results of any 2011 surveys and other conservation activities
    - o Highlight planned 2012 activities
- 9:40 am Minnesota
- 9:55 am North Dakota & South Dakota
- 10:10 am Iowa
- 10:25 am Wisconsin
- 10:40 am Michigan
- 10:55 am Manitoba
- 11:10 am Other updates/planned activities not already covered in National/Regional updates
- 11:30 am Recap of progress towards the four range-wide priorities identified at the 2011 workshop (surveys, standard sampling methods, captive breeding, public communication)  
General discussion - how do continue to move forward, are we lagging in certain areas?  
Identify leads for critical actions
- 11:50 am Feedback on the call - format? length? Do we need another one in the fall? An in-person meeting?

## 2012 Conference Call Participants

Name	Affiliation	Location
Phil Delphey	U.S. Fish and Wildlife Service	Minnesota
Tamara A. Smith	Fish and Wildlife Biologist	USA
Justin Shoemaker	Senior Listing Biologist	Colorado
Heidi Riddle	Fish and Wildlife Biologist	North Dakota
Andrew Horton	Fish and Wildlife Biologist	Minnesota
Ron Royer	Professor in the Division of Science, Minot State University, Butterfly Expert	North Dakota
Jerry Selby	Ecological & GIS Services, Butterfly Expert	Iowa
Scott Moats	The Nature Conservancy	Iowa
Dave Cuthrell	Conservation Scientist, Butterfly Expert, Michigan Natural Features Inventory, Michigan State University Extension	Michigan
Emily Saarinen	University of Michigan	Michigan
Robert Dana	Biologist, Minnesota DNR, Butterfly Expert	Minnesota
Stephen Petersen	Assiniboine Park Zoo	Manitoba
Richard Westwood	Professor, Entomology, Forest Ecology, University of Winnipeg, Butterfly Expert	Manitoba
Cary Hamel	Conservation Science Manager - The Nature Conservancy of Canada, Manitoba Region	Manitoba
Julie Pelc	Nature Conservancy of Canada (MB)	Manitoba
Lisa Bergen	Nature Conservancy Volunteer Coordinator, University of Manitoba	Manitoba
Chris Friesen	Project Botanist, Conservation Data Centre	Manitoba
Christie Borkowsky	Tall Grass Prairie Preserve Biologist (MB Conservation)	Manitoba
Jaimee Dupont	Nature Conservancy of Canada (MB), Graduate Student (Poweshiek Skipper) University of Winnipeg	Manitoba
Stephen Gietz	Nature Conservancy of Canada (MB), GIS Analyst	Manitoba
Heather Wiebe	Agriculture Canada	Canada
Marie-Christine Belair	On behalf of Mark Wayland, Species at Risk Recovery Unit, Canadian Wildlife Service, Environment Canada	Canada
Heather Flynn	COSEWIC Arthropod Committee, Canadian Environmental Assessment Agency	Canada
Scott Swengel	Independent Researcher	USA
Dennis Skadsen	Project Coordinator, Northeast Glacial Lakes Watershed	South Dakota
Laura Hubers	Waubay NWR	South Dakota
Charlene Bessken	Fish and Wildlife Biologist USFWS	South Dakota
Erik Runquist	Butterfly Conservation Biologist, Minnesota Zoo	Minnesota
Elise Rosengren	University of Minnesota, building range-wide GIS database for Poweshiek (wants to give 15 min presentation)	Minnesota
Rhett Johnson	Land Steward	Minnesota
Susan Borkin	Head of Life Sciences & Curator, Invertebrate Zoology	Wisconsin

## **Regrets**

Harlan Ratcliff	Coordinator of the Poweshiek Skipper Project, Butterfly Expert	Iowa
Russ Reisz	The Nature Conservancy Land Steward	Minnesota
Mark Wayland	Species at Risk Recovery Unit, Environment Canada	Saskatchewan
Bob Wrigley	Previously with Assiniboine Park Zoo	Manitoba
Anne Swengel	Independent Researcher	USA
Frank Olsen	Independent Researcher	USA
Dennis Schlicht	Independent Researcher	USA

## ***Goal of Conference Call and Recap of Outcomes from 2011 Workshop in Winnipeg***

### **Cary Hamel – The Nature Conservancy of Canada, Manitoba**

The purpose of this conference call is to facilitate a forum of communication across all jurisdictions to discuss the Poweshiek Skipperling. General goals include progress reports towards recovery, filling data gaps, and to determine 2012 field activities. Last year, 27 participants came to Winnipeg for the Poweshiek Skipperling Workshop. Each region presented and compared notes, and discussed data gaps and land management concerns. Data gaps dealt with basic life history information – larval life history, parasites, fungus, plant food, genetics, habitat, etc.

Critical wide-range actions from 2011 Poweshiek Skipperling Workshop in Winnipeg:

1. Survey every known site to verify extirpation
2. Continue Poweshiek Skipperling working group
3. Standardizing sampling methods
4. Captive breeding initiative
5. Increasing public profile of Poweshiek Skipperling

## ***Jurisdictional Status Updates***

### **USA – Phil Delphey**

Dakota Skipper and Poweshiek Skipperling are candidate species under the Endangered Species Act. Received approval to work on a proposed rule for Federal Register to list species. Tamara Smith is the lead for developing that proposed rule. Internal coordination with other field offices and an in-depth overview of Poweshiek Skipperling required as they develop the proposed rule. It is known that National Wildlife Refuges contain occurrences, particular South Dakota. When species is listed, field office designated as lead – Minnesota office is the lead. Andrew Horton developing range-wide geodatabase for Dakota Skipper. March 8<sup>th</sup>, 2013 is the deadline for getting proposed rule into Federal Register. Both species would be proposed for listing and critical habitat with a 60 day public comment period.

## **Elise Rosengren – University of Minnesota**

Working on a research project under Professor David Andow in partnership with David Cuthrell and Phil Delphy. Goal is to create a range-wide geodatabase that can be queried. Intent is to include known, presumed and possible occurrences from 1965 to present. Data will reveal population status over time. Hoping it will become a permanent data site. A website will be used to house the dataset. The geodatabase will assist in further surveys and the creation of a probability model.

## **Canada – Marie-Christine Bélair**

Proposed recovery plan posted for public review (see link below). Funding provided to Nature Conservancy of Canada to monitor Poweshiek Skipperling. A public meeting was held in Vita, Manitoba in March last year to raise public awareness and to educate. Twelve people attended the public meeting and one person wanted to plant native plant species to help recovery efforts.

Link to the Government of Canada's Proposed Recovery Strategy for the Poweshiek Skipperling: [http://www.sararegistry.gc.ca/document/default\\_e.cfm?documentID=1355](http://www.sararegistry.gc.ca/document/default_e.cfm?documentID=1355)

## **Minnesota – Robert Dana**

Most news for Minnesota from Erik Runquist and Elise Rosengren. Western Minnesota surveyed, Dana went out and examined historical sites and saw no sign at two sites. Minimal report, but picture for Minnesota looks grim.

## **Dennis Skadsen – South Dakota**

Rivervalley Bluff, third year looking for them in refuge. Both Dakota and Poweshiek are not there, likely due to the deterioration of prairies. All along highway ditches spraying was done. Doesn't think we'll ever find anything again there.

## **Erik Runquist - Minnesota Zoo**

Received grant for prairie butterfly conservation. Poweshiek is priority, but broadly interested in other species. Emphasis is on prairies. Goal is to systematically resurvey sites with the hope that we can determine whether or not permanent populations exist on the Minnesota side of the border, and if so, to what degree is it contiguous with the Manitoba population(s) Applying for federal permit for captive breeding program. Hope to optimize survival and build up population. Also interested in genetic research. Identify global threats and serve as a major source of public outreach. Offered to host next conference. Legacy amendment passed by Minnesota voters that provides funding for arts and cultural heritage with prairie being part of cultural heritage.

### **North Dakota - Ron Royer**

The objective of the Prairie Pot-Hole Initiative is to gain a thorough status of Skipperling, which includes a spatial database to characterize habitat and for range-wide identification. Interested in obtaining a concrete status because we just don't know what the true status is. No funding for surveys, so no concrete plans for 2012.

### **Jerry Selby – Iowa**

A proposed pipeline project in the west portion of the state means butterfly surveys will be conducted in that region (called West River Country) for an environmental impact statement. However, it might be a stretch for Poweshiek funding due to geographic scope of project and its overlap with Poweshiek's range.

### **South Dakota – Dennis Skadsen**

Continuing surveys, more fieldwork this field season. Last year, about a dozen sites surveyed. No Poweshieks found. Not even at common sites. Lots of interest from Prairie Conservation. Low areas now being plowed. Lost all CRP. Wind energy projects will affect some of these sites. Widespread drainage is also an issue. Too much land to survey, and not enough workers on the ground. There is a need for specialist to get survey work done.

### **Iowa – Jerry Selby**

No surveys done last summer. If any surveys were done, they were done by others passing through. No Poweshieks found in Iowa. No funding for surveys where Poweshieks might occur. Haven't seen Poweshieks since 2008.

### **Wisconsin – Su Borkin**

Two areas known in southeast corner of state. Both sites are state owned. Scuppernong Prairie site. A volunteer surveyed daily during flight period. Numbers were somewhat up from 2010, but not as high as 1990's. Population seemed to have rebounded over some of earlier years, but land manager for that particular site is retired. Proposal whether or not to conduct prescribed burning. Numbers are so low, that it doesn't seem like the best way to handle the situation. About a mile from Scuff site, remnant prairie site showed 3-6 individuals. Management to increase native prairie habitat. Small numbers and small area, but interesting site. Will continue to monitor site. Reports that Poweshiek occurred within site that was previously not known (Kettle Moraine Low Prairie). 2010 DNR staff reported sightings from site that they formerly occurred in. However the report is questionable and requires follow-up.

## **Scott Swengel**

Surveyed one site. Surveyed last two years during excellent timing. Numbers were consistent with our counts the 7 years we counted the same site during 2001-2009. Site not of overall high quality, no high prairie. No prescribed fire management at this outlier site.

## **Michigan – Dave Cuthrell**

Observed Poweshieks at six sites. Counts range from 9-564 at a single site. 898 total observations in 2011. Three sites had over 100. Many sites had record high counts. Plans for 2012: one more year of funding, will be visiting all seven sites again and three additional sites that have not been visited.

**Cary Hamel** – sites close by?

**Dave Cuthrell** – Not really. Some sites still likely functioning as metapopulations. Small ponds between areas of occupation. One site consistently low count, then none for a few years, then next year just a few. Suspects counts are low but ability to detect is difficult especially with only 1-2 visits of a site per season.

## **Emily Saarinen – New Assistant Professor with University of Michigan-Dearborn**

Entomologist and conservationist, looking at population genetics. Only require a 2 millimetre wing fragment to get genetic sample. Would like to offer lab for central tissue sampling and work to standardize methods. Collaborating with Erik Runquist, and open to suggestions. Trying to learn about genetic diversity throughout range. Decent populations in Michigan, wants to get samples outside Michigan to compare. Performing complete genetic scan of Poweshiek to identify conservation challenges. Concerned about metapopulation dynamics.

**Robert Dana** - Nuclear DNA?

**Saarinen** - Yes, microsatellite DNA, Erik does Mitochondrial DNA approach. Between the two of them, they will have a good look at genetics.

**Robert Dana** – quality of sample?

**Saarinen** – Depends, but was able to get DNA from a 1940's sample.

**Erik Runquist** – The older the sample, the more likely some information will be lost. Hoping to get samples from captive breeding program.

**Saarinen** – Note that there are additional species being studied genetically.

## **Manitoba – Jaimee Dupont**

Last summer recap - Nature Conservancy of Canada (NCC) and Richard Westwood with the University of Winnipeg, Funding from Environment Canada and Province of Manitoba. Tall Grass Prairie Preserve teams surveyed about 45 sites. Most were NCC properties. 13 sites contained occurrences, with 9 new sites. In general, numbers up from 2010 but down from 2008. Survey method was number per hour. 10-15 per hour. Some sites had up to 25. Site that underwent a spring 2011 prescribed burn contained highest numbers observed in 2011.

**Richard Westwood** – populations seem to be a little higher than 3-4 years ago.

**Robert Dana** – burn site surveyed before? Jamie says no, not really in an area they expected to find them. Richard says no one's really been in that site.

Size of Sites? Richard says up to a ¼ section in size.

**Cary Hamel** – All sites in Manitoba in an area of 5-7 square miles in size. May be a single metapopulation. Even new sites are close to existing populations. Some sites do have a mile or two between them.

### **Cary Hamel - Manitoba**

NCC Manitoba is trying to pull together more detailed information on fire effects/fire behaviour in relation to Poweshiek Skipper distribution, abundance, and trends. NCC has compiled a burn history for many Poweshiek sites and is working to characterize prescribed and wildfires that occur within the species' range. E.g. in any given burn how many unburned refuges ('skips') are left behind and how large are they? For most fires since 2009, mapped out fine scale fire boundaries, fire skips and overlaid Poweshiek sites to examine effects. Interested in long-term observations of Poweshiek numbers in relation to this growing dataset on fire behaviour. Study is still in its early days, but it is apparent that fire does not eliminate Poweshiek Skipper – largest numbers of Poweshiek observed in 2011 were within the boundaries of a spring 2011 prescribed fire, and surveys in 2010 showed Poweshiek declined compared to previous years both in burned and in unburned sites. Fires behaviour as it relates to its influence on Poweshiek Skipper and its habitat is largely unknown, however, and it is not appropriate to generalize (e.g. does a fire in June affect Poweshiek differently than one in September?).

NCC and Tall Grass Prairie Preserve partners are also measuring other effects of land management practices on prairie vegetation (such as haying and grazing). Jaimee Dupont analyzed 20 years of permanent vegetation plot data in the context of fire history. Black-eyed Susan (*Rudbeckia hirta*), which is a preferred nectar source for Poweshiek Skipper, has been declining over 20 year study period, and data suggest a statistically significant negative relationship with time since last fire (i.e. the longer a site goes without fire, the fewer Black-eyed Susans observed). In general, several plants indicative of dry prairie declined over study period potentially as a result of a recent wetter climate cycle and woody encroachment into prairies.

NCC aims for a 5-6 year fire rotation. At most sites within the Poweshiek Skippers range we have been unable to achieve this rotation, in part due to the recent wetter weather cycle. NCC recently worked with TNC to 'climate change adapt' its conservation plan for the Tall Grass Prairie area, including the entire Canadian range of Poweshiek Skipper. Expect potential continued decline in prairie acreage as area is expected to become increasingly wetter. Expect wetlands to expand at expense of prairie (as well as increased woody encroachment at the expense of prairie. Decline in available Poweshiek habitat expected.

### **Stephen Gietz – Manitoba**

– combined datasets from 79 sites, 22 sites have Poweshiek occurrences. Not all sites surveyed in 2011.

### **Chris Friesen – Manitoba Conservation Data Centre**

- Proposed for provincial endangered status – pending government decision
- Willing to partner with NCC and University of Winnipeg

**Scott Swengel to Cary Hamel** – Implement haying for prescribed management.

Cause of wildfires to prevent: start on edges of roads. Richard Westwood recommended talking about maintaining fire breaks. Wildfire in October 2009 – high wind speeds and dry conditions. Core range burned in 2009 and 2011. Low numbers in 2010, recovery in 2011. Hot fire that went down to mineral level. Impossible to stop. Dangerous.

**Swengel** – Were fires set on purpose?

**Christie Borkowsky** – arson investigation revealed 1-3 people may have been responsible.

Local fire department being called out, perfect conditions for wildfire. 4-5 square miles in size. Multiple fire departments to control. Intense fire.

**Hamel** – 1,900 hectares.

Fire traditionally used in Tall Grass Prairie Preserve. People still using fire in pasture management.

**Borkowsky** – some local landowners, yes. Spring burns.

**Richard Westwood** – on haying. An area to explore in more depth. Challenge is woody encroachment before you can hay.

How do you reconcile occurrences after burn? Skips?

**Westwood** – may be some movement. But likely fire is erratic enough to skip areas.

**Hamel** – Recognize that Poweshiek may be sensitive to fire behavior. Some areas are excluded from prescribed fires.

### **Stephen Petersen – Assiniboine Park Zoo**

Background in population genetics in marine mammals. New Conservation and Research department established at the Zoo including building with 2 labs. Labs set up for genetic work for conservation. Butterfly garden house put up last year. In future, captive breeding attempts. Might be able to facilitate program. If someone wants to collaborate contact him (Minnesota Zoo expressed interest).

**Cary Hamel** – Minimum of 225 individuals for all sites combined in Manitoba in 2011.

Michigan population is larger than Manitoba's. Hope funding comes in, two field teams to revisit every known site, and historical occurrences, and suitable sites. Need to get into private lands which require permission. Community pastures may also be targeted for surveys. Fire effects work to continue. Interpretive centre will have Poweshiek display to engage public.

### ***Discuss where to go from here***

**Cary Hamel** – Recap five range-wide priorities from last years workshop. Michigan, Wisconsin and Minnesota to systematically survey. North Dakota and South Dakota facing funding challenges.

**Erik Runquist** – funding for fieldwork in June and July. Would like specific target input. Would like to know the Manitoba sites, to examine cross border occurrences.

**Laura Hubers** - small chunk of money to survey historical sites to see if they have any Poweshieks.

**Richard Westwood** – Currently developing a local degree day model for adult emergency prediction.

**Robert Dana to Richard Selby** - Been using degree day data based on emergence data. Would be interesting to examine larvae. Uses data to predict when field surveys should be done for Iowa and West Minnesota (up to Clay County).

**Su Borkin** - 1998-99 were really interesting year for early shift of species. Peak flight days.

**Selby** - Unable to find easily accessible weather data. Need high/low temperatures for nearest weather station on surveyed dates.

**Hamel** - Need to develop standard sampling methods for entire range. Anyone want to discuss progress? Manitoba switched to number of individuals seen per hour.

**Selby** - Observations per hour or per distance (with GPS it is easier). Time is probably the easiest.

**Su** - Explain number per hour protocol?

**Selby** - Fixed transects ideal. Goal in recent years to just find them. More intensive search.

**Dana** - 2008 layed out six transects, and long undefined transects and both kept GPS tracks and found two were closely correlated. Either way works for large sites, but unsure about smaller areas.

**Su** - consistency most important. Focused search better when trying to locate occurrences, straight transects difficult.

**Cary Hamel** – Captive breeding and basic life history work, genetics, microhabitat. Captive breeding and genetics lead up Minnesota Zoo, Emily University of Minnesota, Stephen Petersen at Assiniboine Park Zoo. Emily will send protocol for wing fragment samples. The more samples her and Erik Runquist can get the better.

**Stephen Petersen** - Not sure if there's a need for skippers. Applying for CITES permit to move across border. Might be able to facilitate getting samples from Canada to the USA. Stephen Petersen will have to coordinate with NCC and Richard Westwood. Getting permission is a time consuming process.

**Borkin to Dave Cuthrell** - Captive breeding and host plants? Any follow up on *Muhlenbergia richardsonis*?

**Erik Runquist** - Buying some grasses from plant suppliers. Would appreciate any host plant information. Need specific rearing protocols.

**Cary Hamel** - Public Communication and Outreach – Minnesota Zoo ramping up to play large role. Want to build a large prairie facility. Prairie quads with native plants. Prairie conservation at forefront of zoo.

Long-term plan for Assiniboine Park Zoo is to renovate prairie and boreal portion of zoo.

**Dana** – Wrote an article in The Minnesota Department of Natural Resource, *Minnesota Conservation Volunteer* – discuss Poweshiek and to keep eyes open. Recent case of a woman who reported occurrence of winter caddis fly that were previously known in only two sites in the

world. Increase chances of finding Poweshieks by getting more eyes on the ground. NCC had a few articles posted.

### *Future and Conclusions*

**Cary Hamel** – Exciting to see lots of progress and uplifting updates. Regarding feedback on call, should we do this conference call again or in person? Erik Runquist offered to investigate the possibility of hosting an in-person workshop during the fall of this year. Overall, everyone agreed that that sounded great.