

# The OFWIM Annual Conference Archive(s): a Title Slide Review of the Last Decade's Presentations

Donald L. Schrupp  
Colorado Division of Wildlife (Retired)



ORGANIZATION OF FISH &  
WILDLIFE INFORMATION  
MANAGERS

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VIRTUAL CONFERENCE &  
BUSINESS MEETING

October 5-6, 2020

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## OFWIM 2010 Conference: October 18-21 in Cadiz, KY!!



# Welcome to OFWIM 2010!

- Year of the Unexpected
- Jen Carlino had a family emergency
  - Thoughts and prayers
- Mark Bruner accepted new position
  - We wish him well
- Keith Wethington President Elect
- We will need participation at the business meeting

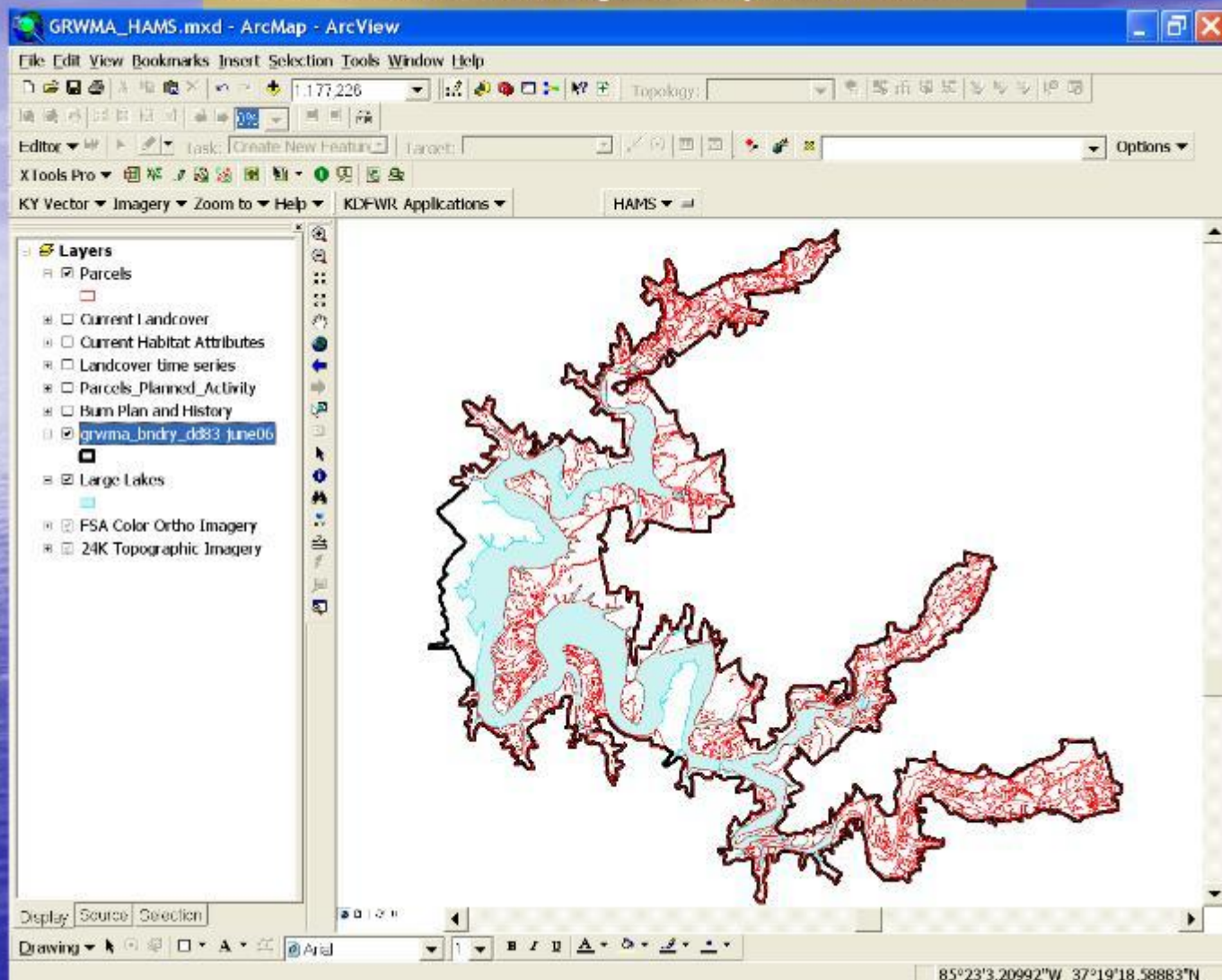


# **Kentucky's Jackson Purchase Region: Overview and Management of Public and Private Lands**

- Tony Black:
  - Wildlife Regional Program Coordinator: Purchase Region
- Pat Hahs
  - Public lands Supervisor, Purchase Region
- Zak Danks
  - Private lands Biologist, Purchase Region
- Keith Wethington
  - Wildlife Program Coordinator: Kentucky Fish & Wildlife Information System



## Habitat &amp; Activities Management System (HAMS)



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# Developing on-line mapping applications:

Lessons learned the painful way

Jill Maxwell  
Gap Analysis

Nina Chkhenkeli  
NBII



# Talon

## Geospatially Tracking Time and Accomplishments

Mark Brunner and Kirk Keller  
Missouri Department of Conservation



# **The Cactus Moth Detection and Monitoring Network and the Invasive Plant Atlas of the MidSouth: Keeping Up With Technology**

Organization of Fish and Wildlife Information  
Managers Conference

October 18-21, 2010  
Cadiz, Kentucky

Clifton Abbott  
Geosystems Research Institute  
Mississippi State University



# **Development of handheld applications for biodiversity information: a two-way need for interoperability**

**Annie Simpson**

**Invasive Species Information Manager  
US Geological Survey  
[asimpson@usgs.gov](mailto:asimpson@usgs.gov)**



U.S. Department of the Interior  
U.S. Geological Survey



# SmartPhone Development

Examples at two ends of the spectrum

Kirk Keller

Missouri Department of Conservation

# Digital Capture of Field Data OR The 'Magic Pen' Put to the Test

Bruce Schmidt

Pacific States Marine Fisheries Commission

Delivered at:

Organization of Fish and Wildlife Information Managers

2010 Annual Meeting

Cadiz, KY



[www.streamnet.org](http://www.streamnet.org)





# *Getting the Whole Picture: Evaluation of a Tool for Recording Presentations and Providing Training*

*Danny Lewis  
TPWD Inland Fisheries*



# Truth or Consequences

Don Katnik  
Maine Inland Fisheries & Wildlife

OFWIM 2010 - Cadiz, KY

**Data Integrity in the Information Age**





DUCKS UNLIMITED

# Developing a System to Track Wetland Changes Over Time Using ArcSDE



DUCKS UNLIMITED

Great Lakes/Atlantic Regional Office

1220 Eisenhower Place • Ann Arbor, MI 48108

734.623.2000 [www.ducks.org](http://www.ducks.org)

Updating and Tracking Wetlands

*Texas Parks and Wildlife's*

# Pollution Response Inventory and Species Mortality Program

Danny Lewis  
TPWD Inland Fisheries

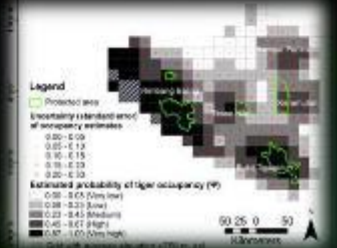




# UNCERTAINTY IN PREDICTING SPECIES DISTRIBUTION

A case study using four methods to map tiger occurrence in Central Sumatra

Sunarto & Marcella J. Kelly, Virginia Tech





Determining endangered species habitat in face  
of cryptic species and few occupancy surveys:  
an example from the red panda (*Ailurus fulgens*)

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Naveen K. Mahato & Michael R. J. Forstner  
Texas State University-San Marcos

# ADDITIVE EFFECTS OF MINING AND RESIDENTIAL DEVELOPMENT ON STREAM CONDITIONS IN A CENTRAL APPALACHIAN WATERSHED

Eric Merriam

George Merovich

J. Todd Petty

Jennifer B Fulton

Mike Strager

# Data Management for Coordinated Assessments or: Finally! A reason to share data

Bruce Schmidt

Pacific States Marine Fisheries Commission

Delivered at:

Organization of Fish and Wildlife Information Managers

2010 Annual Meeting

Cadiz, KY





### Data Access Wizard

Use the Data Access Wizard to discover and access spatial (GIS) data!

To get started, perform a search and then explore the ways you can access the data you find...

- Download Data.
- Add multiple datasets to your *data cart* for processing and download.
- Access datasets via online maps, WMS services, or direct connections in ArcGIS.

## Data Access Wizard

Search for datasets using one of the following options:

▣ [Search by Keyword\(s\):](#)

▣ [Search by Data Provider:](#)

▣ [Search By Region:](#)

▣ [Search by Map:](#)

Browse [All Data](#)

List datasets available via [Internet MapServices](#)

# Making Southern Appalachian Biodiversity Information Available for Decision Making: Assessing Users' Information Needs and Practices

Miriam L.E. Steiner Davis, Suzie Allard, Carol Tenopir and  
Christopher Caldwell

Organization of Fish and Wildlife Information Managers  
2010 Conference and Annual Meeting, Cadiz, Kentucky

# The Importance of Good Data Management

Viv Hutchison  
US Geological Survey  
OFWIM Conference  
October 18-21, 2010  
Cadiz, KY



Jeff Smith  
Andrea Ostroff  
USGS NBII

# **National Fish Habitat Action Plan Data Viewer Application**







# Florida Fish and Wildlife Conservation Commission's Roles in Response to the DeepWater Horizon Oil Spill

Beth Stys

Florida Fish and Wildlife Conservation Commission





# State Wildlife Action Plans Search Tool

**Elizabeth Martín**

**U.S. Geological Survey, NBII Program**

**Melanie Steinkamp**

**U.S. Fish and Wildlife Service**

**Organization of Fish & Wildlife Information Managers 2010 Conference**

**October 21, 2010**

**U.S. Department of the Interior  
U.S. Geological Survey**



# Building a National SGCN Dataset

**Moving form 56 Disparate Plans to One  
Integrated Product**

U.S. Department of the Interior  
U.S. Geological Survey



# Florida's State Wildlife Grants Program: Maximizing our return on investment



## Florida's Wildlife Legacy Initiative



*Keeping Common  
Species Common*



Florida Fish and Wildlife  
Conservation Commission  
Visit: [MyFWC.com/wildlifelegacy](http://MyFWC.com/wildlifelegacy)





# AFWA and OFWIM

Looking forward

Kirk Keller  
Missouri Department of Conservation



# OFWIM 2011

Organization of Fish and Wildlife Information Managers  
*Annual Conference and Business Meeting*

"Managing Fish and Wildlife Data to Adapt to Changing Environments"

October 17-20

St. Louis, Missouri

*Drury Plaza Hotel at the Arch*



*Shaw Nature Reserve*



*Missouri Botanical Gardens*



**GeoCaching is a real-world treasure hunting game. Players locate hidden containers (geocaches) using GPS, their navigational skills, and wits.**

**Participants in GeoCache OFWIM (GO!) have been grouped into Teams that will compete throughout the conference to score the most points and win the GO! Trophy.**

**Don Schrupp  
Crego Ramiro**

**Sabra Schwartz  
Jim Husband  
Julie Prior-Magee**

**Beth Stys  
Tony Spicci  
Danny Lewis**

**Dean Jue  
Tom Treiman  
Keith Wethington**

# **Coordinated Assessments**

## **Regional Data Sharing in Action**

**Bruce Schmidt, PSMFC**  
**Tom Iverson, CBFWA**

Presented at

**Organization of Fish and Wildlife Information Managers**

**St. Louis, MO**

**October 18-20, 2011**



# Potential Barriers to Use of Regionalized Datasets and Some Thoughts on Overcoming Them

Donald L. Schrupp, Wildlife Ecologist  
Denver, Colorado



**OFWIM Annual Conference St. Louis, Missouri  
& Business Meeting October 17-20, 2011**



# Social Media Overview



- ▶ Where is your organization?

# Should Your Organization be Twittering and Facebooking? A Case Study for Wildlife Health

Cris Marsh, MLS,  
Wildlife Data Integration Network

*Organization of Fish & Wildlife Information Managers Annual Conference  
October 18, 2011*

*National Wildlife Health Center  
United States Geological Survey*

*Nelson Institute for Environmental Studies  
University of Wisconsin - Madison*



**mdc.mo.gov**

MISSOURI DEPARTMENT OF CONSERVATION

# Social Media Outreach

chris.cloyd@mdc.mo.gov



# MUSSEL SPECIES TURNOVER ALONG THE RIVER CONTINUUM

**Carla L. Atkinson**

University of Oklahoma &  
Oklahoma Biological Survey



Organization of Fish and Wildlife Information Managers Meeting  
October 2011



# **Evaluation of the Fish Invasiveness Scoring Kit (FISK) as a Screening Tool for Non-Native Fishes in Florida**

Larry L. Lawson

Jeffrey E. Hill

Scott Hardin

Gordon H. Copp

**UF** Tropical Aquaculture Laboratory  
*School of Forest Resources and Conservation*  
UNIVERSITY of FLORIDA





# Movement patterns around dens in two Illinois beaver populations



Ramiro D. Crego, Joanne C. Crawford, Craig K. Bloomquist,  
Clayton K. Nielsen, Randall P. Havens, and Thomas A. Nelson

Cooperative Wildlife Research Laboratory and Department of Forestry  
Southern Illinois University Carbondale

Department of Biology  
Eastern Illinois University

# Effects of Wastewater Treatment Plants on Water Chemistries and Benthic Invertebrate Populations in the Middle Rio Grande

Michelle Nuanez  
University of New Mexico  
Department of Biology  
[mblakely@unm.edu](mailto:mblakely@unm.edu)







# The Beginning

Lynnae Sutton, Fish Passage Center

Development of an Online Hatchery Release Data Mapping Application

# Assessing the Validity of Online Surveys for Collecting Post-Season Harvest Data



Ron Reitz  
Resource Science Division



# Opening the Door to Aquatic Data:

*Improving Accessibility  
of Long Term Aquatic  
Sampling Data*

*Craig Scroggins and Julie Fleming, Missouri Department of Conservation*



# **Citizen Science**

## **The Benefits and Problems of Messy Data**

**Jon Purvis, Texas Parks and Wildlife Department**





## **TRACKING AND REPORTING ACTIONS FOR CONSERVATION OF SPECIES**

*Expanded PAG Inaugural Meeting*

# ***The National Map: US Topo maps***

**Ray Fox**

**USGS Geospatial Liaison for Missouri**

**OFWIM 2011 Conference**

**10/18/2022**

# *A Nationwide Application for Managing Invasive Exotic Species*

*Dean Jue*  
*Florida Resources and  
Environmental Analysis Center*  
*Florida State University*  
*E-mail: [djue@admin.fsu.edu](mailto:djue@admin.fsu.edu)*

*Sabra Schwartz*  
*HDMS Program Supervisor*  
*AZ Game and Fish Department*  
*E-mail: [SSchwartz@azgfd.gov](mailto:SSchwartz@azgfd.gov)*



# MISSOURI RIVER PUBLIC USE ASSESSMENT

Collecting, Managing and  
Presenting the Results

Steve Sheriff  
Rochelle Renken  
Tom Treiman  
Tom Kulowiec  
Giancarlo Rhodes





# Climate Change Planning in a State Agency

Beth Stys

Florida Fish and Wildlife Conservation Commission  
Fish and Wildlife Research Institute



2012 Annual OFWIM Conference  
October 15-18, 2012  
Austin, Texas

## **Facilitating a Network of Fish & Wildlife Information Managers by Leveraging Emerging IT Technologies**

### Anticipated Sessions

- Conservation on the Move - Mobile Technology
- The Future is Now - Student Research
- Reaching the Masses - Data Sharing/Social Media

### Other Topics of Interest

- New (and old) Technologies
  - GIS
  - Tools that improve efficiency
- TRACS (The new Wildlife and Sportfish Restoration Tracking and Reporting Tool)
- Revising State Wildlife Action Plans



**Austin, Texas**

**Source: Wikimedia Commons**





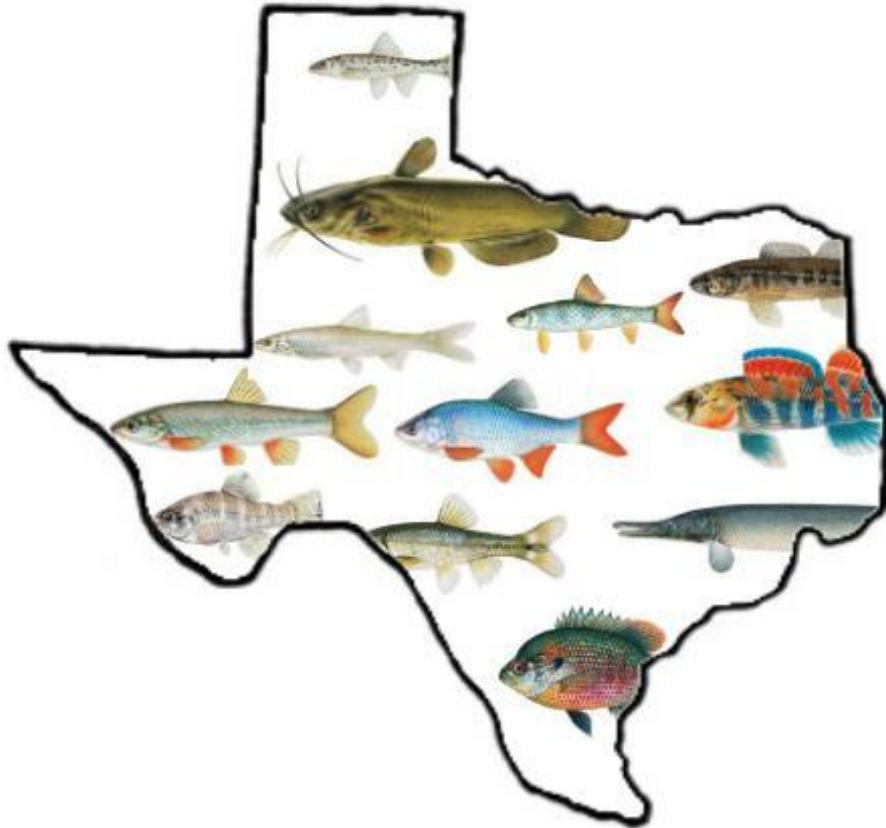
# Welcome to Texas!

## Yee-haw!!!!

John Herron  
The Nature Conservancy  
Austin, Texas

The Nature  
Conservancy   
Protecting nature. Preserving life.™

## Dean Hendrickson - University of Texas at Austin



Not only data!

- ☐ A remarkably powerful platform for the advancement of knowledge and research on the ecological health of streams and rivers
- ☐ A model for open access, efficient delivery of data, and community driven data improvement



# ***BIOTICS 5: COUNTDOWN TO LAUNCH***

***Rob Solomon***

***Tuesday, October 16, 2012***



**NatureServe**

A Network Connecting Science With Conservation

# MULTISTATE AQUATIC RESOURCES INFORMATION SYSTEM (MARIS)



Andrew Loftus  
MARIS Coordinator

Jeff Smith  
Web/GIS Developer, COMSO Inc.  
Under contract to USGS, Core Science Analytics and Synthesis



# **Texas Wildlife Information Management Services (TWIMS)**

**Texas Parks & Wildlife Department,  
Wildlife Division**  
2008 – Present



**2012 OFWIM Conference, Austin, Texas**  
*Stephen Lange, TWIMS Program Specialist*

# ***BISON***

## *Biodiversity Information Serving Our Nation*

Annie Simpson,  
Gerald "Stinger" Guala,  
& Derek Masaki

Eco-Science Synthesis Branch  
Core Science Analytics and Synthesis  
Core Science Systems  
United States Geological Survey





# NY-PAD - New York State Protected Areas Database

## Development, Maintenance and Future Plans



Brent Kinal  
GIS Specialist  
NYSNHP Invasives Species Database Program  
[kinal@nynhp.org](mailto:kinal@nynhp.org)

# Science and the Real World

Jon  
Purvis



# **Database Integrity Looking for Change**

**Don Katnik  
Maine Dept. of Inland Fisheries & Wildlife**

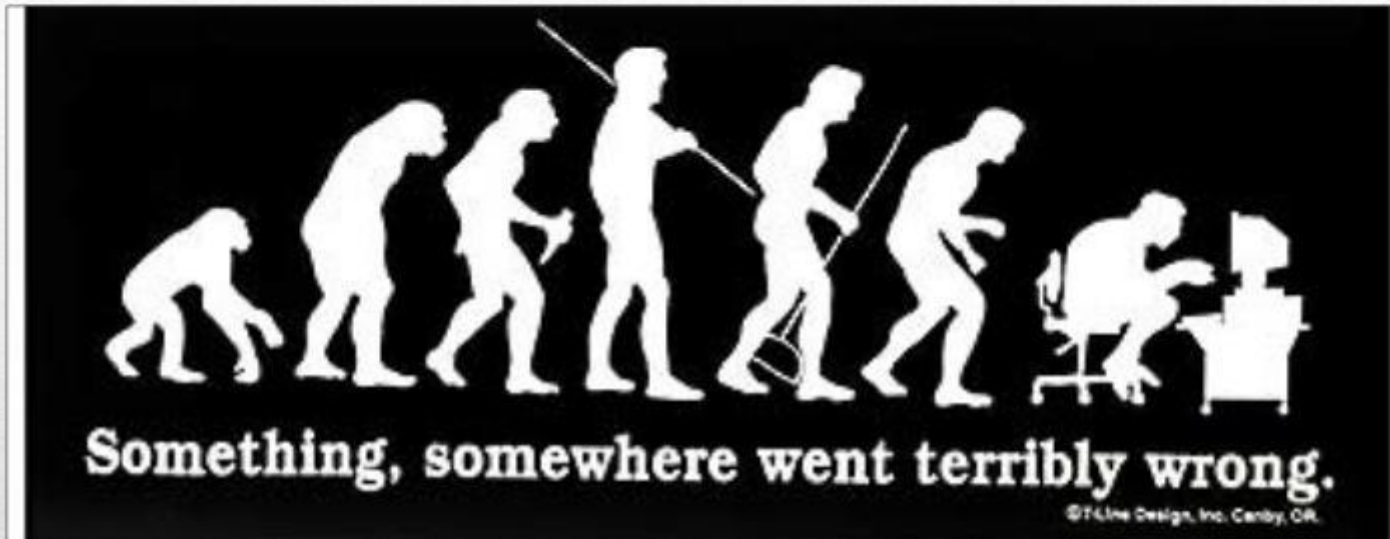
**OFWIM 2012 – Austin, TX**

**You don't have to be a  
programmer anymore:**

*Applying Business Intelligence tools  
in a Natural Resources Agency*







**Social Media for Science Sake !  
Amy Hays, Texas AgriLife Extension**

# Evolution

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# Identification Guide to Marine Organisms of Texas

Select a category

FISHES



CRABS



SHRIMPS



MOLLUSKS



MISCELLANEOUS  
INVERTEBRATES



VEGETATION



OTHER  
VERTEBRATES



# Modeling Distribution of Stream Fishes with Derived Historical Metacommunity Samples

Jian Huang, Emmanuel Frimpong

Department of Fish and Wildlife Conservation, Virginia Tech



OFWIM, Oct. 16, 2012



# Catching cane toads:

Determining biological differences in cane toad (*Rhinella marina*) trappability and assessing the effect of acoustic attractant position and light presence on cane toad capture rates

Alyse Yeager<sup>1</sup>

John Commito<sup>2</sup>, Andrew Wilson<sup>2</sup>,  
Lin Schwarzkopf<sup>3</sup>, Deborah Bower<sup>4</sup>

<sup>1</sup>Biology Department, Baylor University

<sup>2</sup>Environmental Studies Department, Gettysburg College

<sup>3</sup>School of Marine and Tropical Biology, James Cook University,

<sup>4</sup>School of Environmental and Life Sciences, University of Newcastle





Yakama Nation Fisheries  
Yakama Klickitat Fisheries Project



Columbia River Inter-Tribal Fish Commission  
Tribal Data Network

# Automating Stream Inventory Data Entry

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- Mike Babcock, Klickitat Data Manager, Yakama Nation Fisheries
- Nicole Tursich, Database Administrator, Columbia River Inter-Tribal Fish Commission





# mobile in the enterprise

coming to an organization near you

**Chris Gerecke - Timmons Group**

# MDC Mobile: Using iPad's for Collecting Field Data

Joel Sartwell

Systems Analyst

Missouri Department of Conservation



# CYBERTRACKER – MOBILE DATA APPLICATIONS

Texas Parks and Wildlife,  
Wildlife Division



Life's better outside.®





# At-sea Data Collection in the Salmon Fisheries Using GPS-enabled Android

John W. Lavrakas, Wil Black, Alex Lawson (Advanced Research Corp)  
Pete Lawson (NOAA)

Organization of Fish & Wildlife Information Managers  
2012 Conference and Annual Meeting – Austin, Texas  
October 17, 2012



Advanced Research  
corporation



# Leveraging Mobile Technologies (The iMapInvasives Approach)

Brent Kinal  
GIS Specialist  
New York Natural Heritage Program  
Invasives Species Database Program

[kinal@nynhp.org](mailto:kinal@nynhp.org)



[www.iMapInvasives.org](http://www.iMapInvasives.org)



# Integration of Tabular and GIS Technologies in a Web-based Data Query System

Presented at

Organization of Fish & Wildlife Information Managers

Austin, TX

October 17, 2012

Bruce Schmidt

Pacific States Marine Fisheries Commission



# **Texas Fishing Mobile Web**



**Dyanne Cortez, John Taylor  
and Ken Kurzawski**

**Inland Fisheries Division**



***ACCSP:  
Good Data In, Good Data Out,  
Good Decisions***



Julie M. Defilippi  
Atlantic Coastal Cooperative Statistics Program  
Arlington, VA

Atlantic Coastal Cooperative Statistics Program

# Developing Climate Change Adaptation Strategies for Florida

Beth Stys



Florida Fish and Wildlife Conservation Commission



## Organization of Fish and Wildlife Information Managers Technology Survey



### 1. What best describes your agency type?

|                                                                 |                                                                                    | Response<br>Percent | Response<br>Count |
|-----------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------|-------------------|
| International                                                   |                                                                                    | 0.0%                | 0                 |
| Federal                                                         |   | 8.7%                | 2                 |
| Regional (Multi-state)                                          |   | 8.7%                | 2                 |
| <b>State</b>                                                    |  | <b>69.6%</b>        | <b>16</b>         |
| Regional within a single state                                  |                                                                                    | 0.0%                | 0                 |
| Education                                                       |   | 4.3%                | 1                 |
| For-profit private organization                                 |                                                                                    | 0.0%                | 0                 |
| Non-profit private organization                                 |                                                                                    | 0.0%                | 0                 |
| Local government                                                |                                                                                    | 0.0%                | 0                 |
| Other (please specify)                                          |   | 8.7%                | 2                 |
| <b>Results of the Data Standards Technology Survey</b>          |                                                                                    |                     |                   |
| Kevin Patten, Florida Fish and Wildlife Conservation Commission |                                                                                    |                     |                   |
| answered question                                               |                                                                                    |                     | 23                |
| skipped question                                                |                                                                                    |                     | 0                 |



# **Evolution of the OFWIM Web Presence**

**Danny Lewis  
Texas Parks  
& Wildlife**



# 2012: A RIS ODYSSEY

The evolution and future needs of  
TPWD's Resource Information System

Vivian Ackerson

GIS Lab

Texas Parks and Wildlife Department

# LandHelp.info: A Website to Assist Land-holders to Better Manage Their Lands

Donald L.Schrupp and Delwin E. Benson



**OFWIM 2012 Conference - Austin, Texas**

**October 15-18, 2012**



## HABIMAP™ ARIZONA



Mapping Wildlife and Habitat  
Conservation Potential

# A New Map-based Online Conservation Planning and Environmental Review Tool in Virginia



Organization of Fish & Wildlife Information Managers  
2012 Annual Conference



# Web Mapping Made Easy with Google Fusion Tables

David O'Donnell  
Texas Parks &  
Wildlife Department





**WILDLIFE & SPORT FISH  
RESTORATION Organization of Fish &  
Wildlife Managers  
October 2012**



**Wildlife TRACS – Update**

***Jim Husband***

*Fish and Wildlife Information Services/Permit Manager*

*Permit & GIS/Data Science Team Leader*

*Wildlife Resource Bureau*

*Virginia Department of Game & Inland Fisheries*



# Phenology & Citizen Science Go Mobile



Lee Marsh

## WORKSHOP - Ornithological Crowdsourcing: An Innovative Approach to Data Collection

Jessica Zelt

### Citizen Science



Picture courtesy of: thedailygreen.com

**The number of citizen science programs are growing at a rapid rate  
in large part due to the world wide web.**

**It is estimated that in the U.S. alone, approximately 15 million  
citizens are watching and recording birds (Bhattacharjee, Y. 2005).**

**But...although it is currently growing, it is certainly not a new idea!**



01000101011101 • Organization of Fish and Wildlife Information Managers • 101010111000101

0101100101110010 • OFWIM • 0100111010



# OFWIM

## 2013 Annual Conference

### Sep 30—Oct 3, 2013



Schoodic Education and Research Center  
(SERC)



Schoodic Peninsula



© Greg A. Lortford from AcadiaNSign.com

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101000111010101 • Organization of Fish and Wildlife Information Managers • 101110101000

# Applications of Python Programming to Information Management



Don Katnik  
Maine Department of Inland Fisheries & Wildlife  
Organization of Fish & Wildlife Information Managers 2013 Conference







## Developing the Florida Shorebird Database

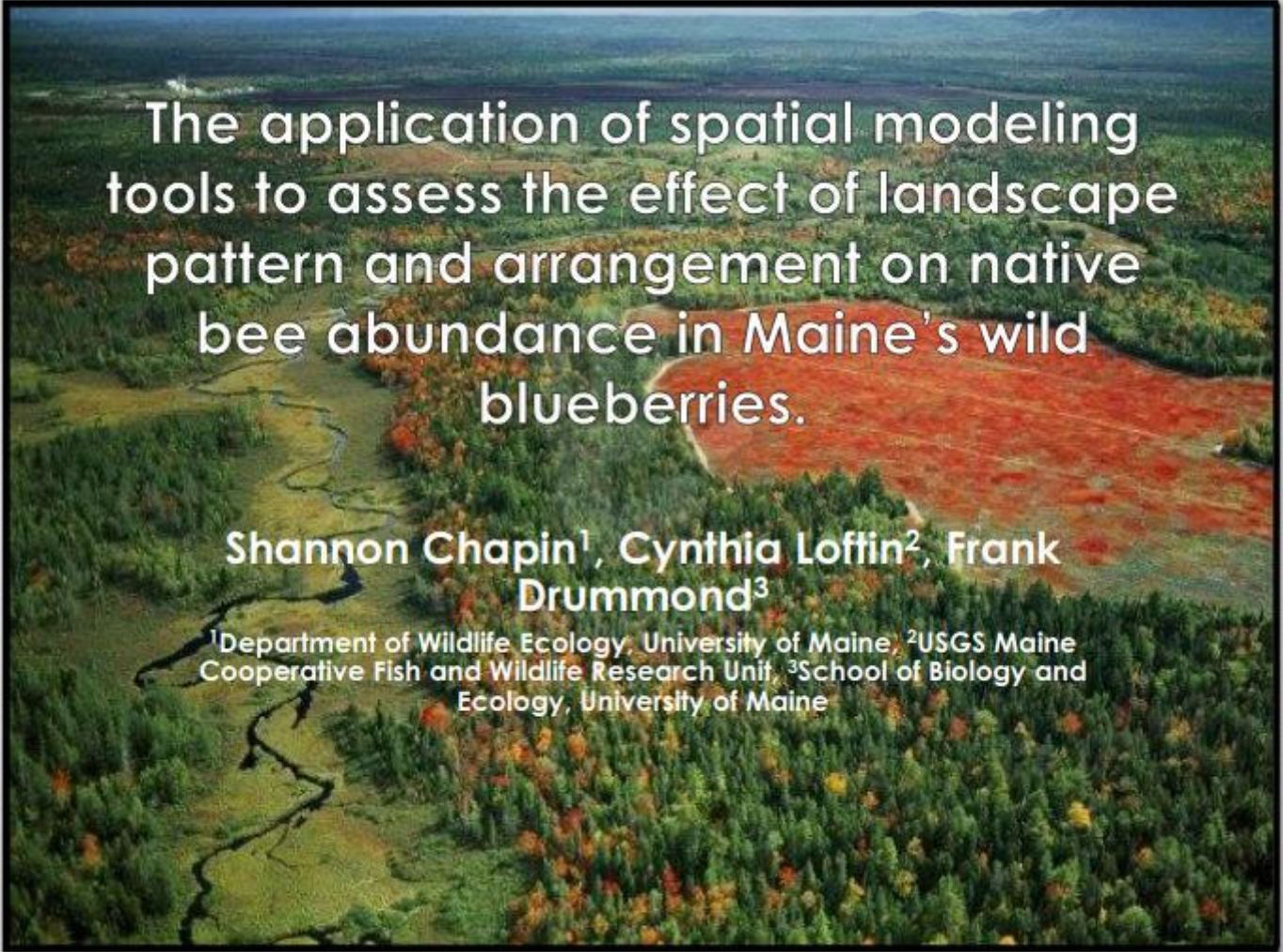
Kristin Rogers, Florida Fish and Wildlife Conservation Commission



### FLORIDA SHOREBIRD DATABASE

AN ONLINE TOOL FOR ENTERING AND EXPLORING DATA ON FLORIDA'S SHOREBIRDS AND SEABIRDS.



An aerial photograph of a landscape. A winding river flows through a green forested area on the left. To the right of the river is a large, rectangular field with a vibrant red color, possibly representing a specific land use or vegetation type. The background shows more forest and distant hills under a clear sky.

The application of spatial modeling  
tools to assess the effect of landscape  
pattern and arrangement on native  
bee abundance in Maine's wild  
blueberries.

**Shannon Chapin<sup>1</sup>, Cynthia Loffin<sup>2</sup>, Frank  
Drummond<sup>3</sup>**

<sup>1</sup>Department of Wildlife Ecology, University of Maine, <sup>2</sup>USGS Maine  
Cooperative Fish and Wildlife Research Unit, <sup>3</sup>School of Biology and  
Ecology, University of Maine



# Producing Dynamic PDFs from Databases

**Danny Lewis**  
Texas Parks & Wildlife



# Organization of Fish and Wildlife Information Managers

Schoodic Education and Research Center

**Long-term Climate Dynamics Provide a  
Surprising Key to the Contemporary World**

George L. Jacobson

*Professor Emeritus of Biology, Ecology, and Climate Change*

2 October 2013





# Maintaining Data Security while Promoting Data Sharing

Presented to

**Organization of Fish & Wildlife Information Managers**

Acadia National Park

October, 2013

**Bruce Schmidt**

**Pacific States Marine Fisheries Commission**





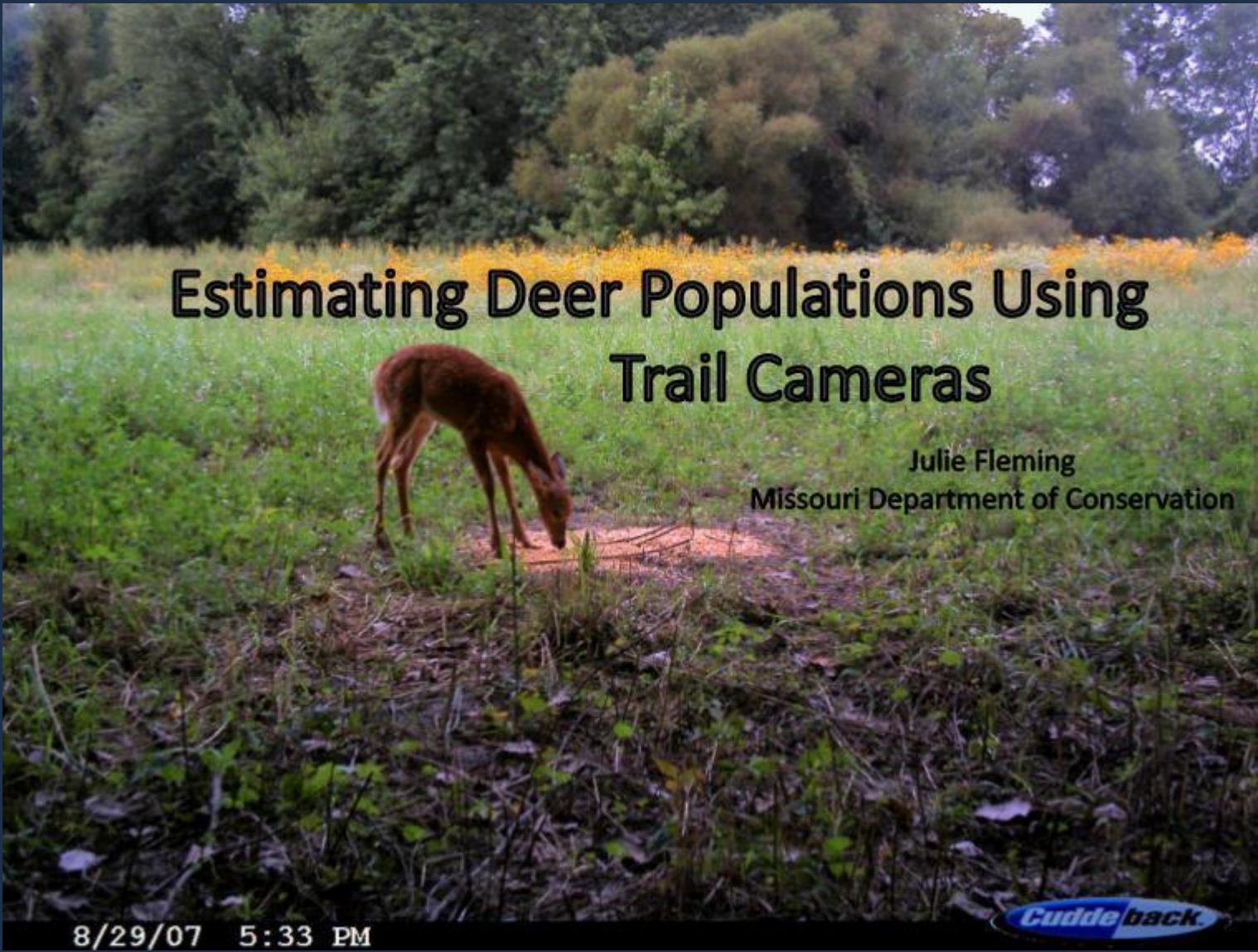
# Landscape Level In-Stream Habitat Mapping Using Side Scan Sonar

Beth Stys

Florida Fish and Wildlife Conservation Commission





A photograph of a deer in a field with a forest in the background. The deer is standing in a grassy area, looking down. The background is a dense forest of green trees.

# Estimating Deer Populations Using Trail Cameras

Julie Fleming  
Missouri Department of Conservation

8/29/07 5:33 PM

Cuddeback

# ***Integrating SAS Business Intelligence and ESRI for Customer Relationship Management***





# GeoUI Off the Hook!

improving the user experience in our geo-mobile apps

OCTOBER 2, 2013



[chris.gerecke@timmons.co](mailto:chris.gerecke@timmons.co)

**Interactive Browser Map in  
Support of “Bald Eagle Nests,  
Bald Eagle Concentration  
Areas and Communal Roosts  
in Virginia: A Guide for  
Landowners”**

OFWIM Conference

Wednesday Afternoon  
October 2, 2013

Blair Jones  
Virginia Department of Game  
and Inland Fisheries



Norfolk Botanical Garden Eagle Cam 2006-12-05





# **SAFIS Goes App: Development of a hand-held application for fisheries trip reporting**

2013 OFWIM Annual Conference and Business Meeting  
Winter Harbor, ME

Julie Defilippi  
Senior Data Coordinator, ACCSP



# TRACS and the Grants Management Process Update

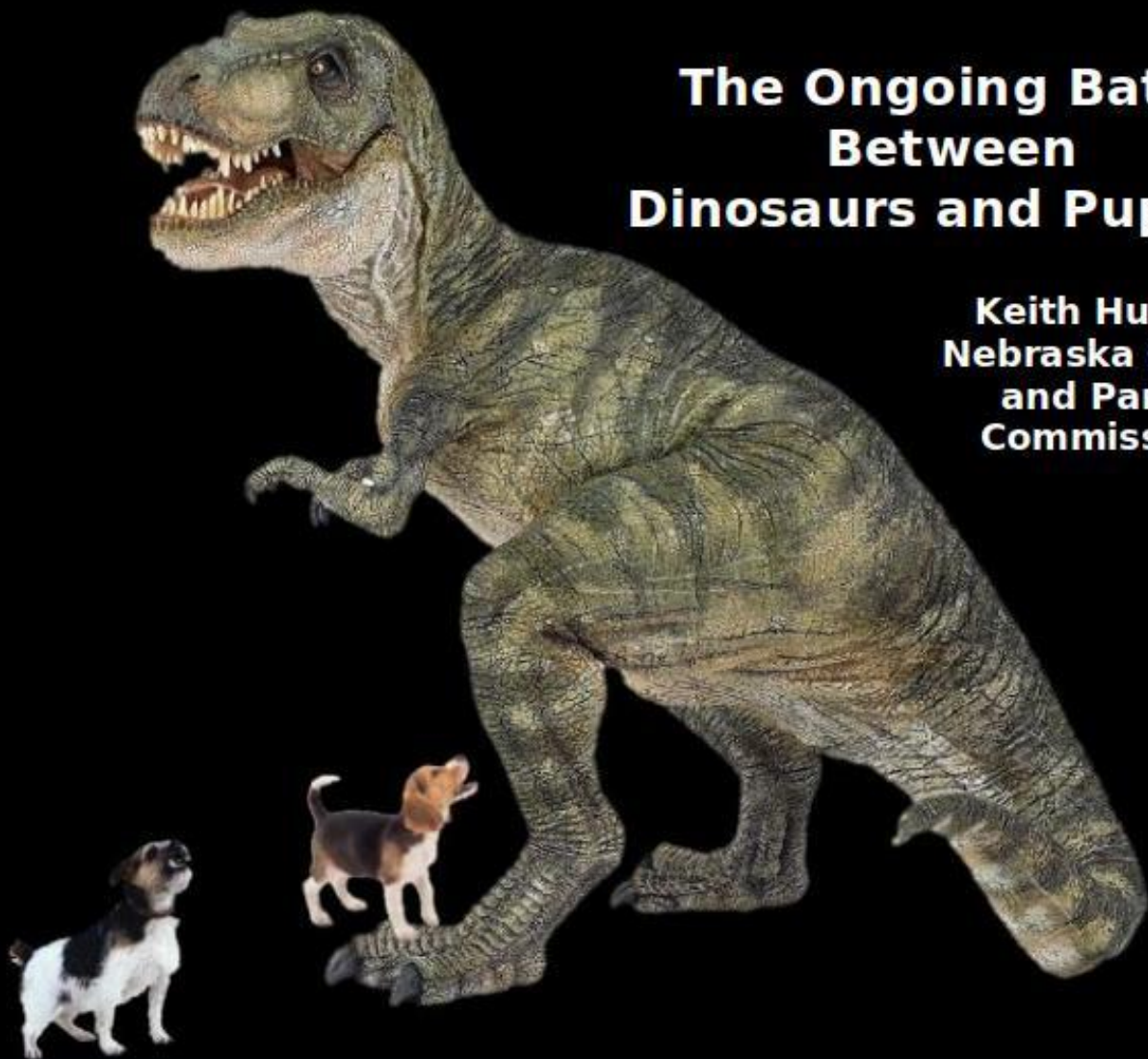
James Husband  
Virginia Department of Game & Inland Fisheries

OFWIM Meeting  
Acadia National Park  
October 2013



# **The Ongoing Battle Between Dinosaurs and Puppies**

**Keith Hurley  
Nebraska Game  
and Parks  
Commission**





Environnement  
Canada

Environnement  
Canada

Canada



# **WILDSPACE: Wildlife data integration in a government context**

**OFWIM Annual Meeting  
Schoodic Education and Research Center  
2013-10-03**



**Eric Woodsworth  
Canadian Wildlife Service, Saskatoon**



# A Tale of Three Content Management Systems (CMSs)

Donald L.  
Schrupp

**OFWIM 2013 Conference**

Acadia National Park - Maine

30 September - 03 October, 2013

Schoodic Education & Research Center



# Introduction to SAS DataFlux software and its use at Texas Parks and Wildlife

OFWIM 2013 Annual Conference

October 03, 2013

Jimmy White



# Survey: AFS Members and Social Media

Julie Defilippi, Atlantic Coastal Cooperative Statistics Program

Joanna B. Whittier, University of Missouri

Thomas Litts, Georgia Department of Natural Resources

Andrew J. Loftus, Andrew Loftus Consulting



# Texas Youth Hunting Program

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Jon Purvis

Texas Parks and Wildlife Department





## 2014 OFWIM Annual Conference & Business Meeting

High Country Conference Center, Flagstaff, AZ

Sept. 28, 2014 – Oct. 2, 2014

“Exploring Emerging Technological Tools and Solutions for  
Common Fish and Wildlife Information Management for Common  
Fish and Wildlife Information Management Challenges”





# Welcome to the Grand Canyon State and WTF (Welcome to Flag)



**NO DAYLIGHT SAVING TIME**

# Energy harvesting and wildlife monitoring

Michael W. Shafer

Assistant Professor

Mechanical Engineering  
Northern Arizona University  
Dynamic and Active Systems Lab

OFWIM 2014



# Using GIS Tools to Enhance Permit Compliance



James Husband  
Fish & Wildlife Information  
Services/Permits Manager

OFWIM Conference  
September 29, 2014





# Leveraging ArcGIS JavaScript API to Enhance Web Applications

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Virginia Department of Game and Inland Fisheries

# Leveraging Your Geo-spatial Data Investments with Quantum GIS: an Open Source Geographic Information System

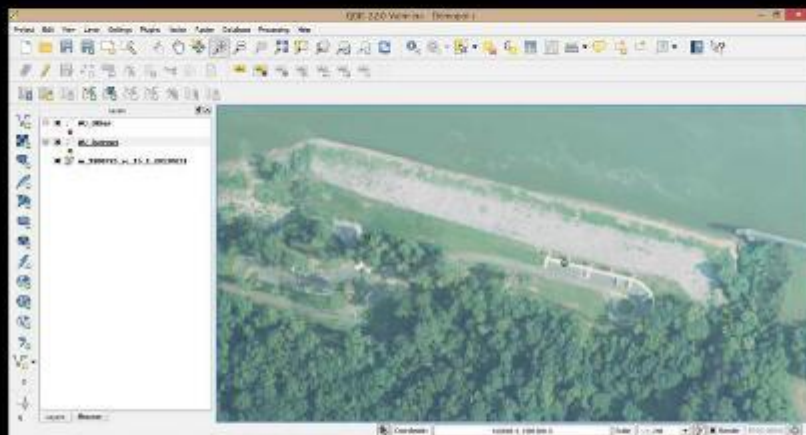
Donald L. Schrupp – Colorado Division of Wildlife (Retired)  
Danny Lewis – Texas Parks and Wildlife Department



Exploring Emerging Technological Tools and  
Solutions for Common Fish & Wildlife Information  
Management Challenges  
2014 Annual OFWIM Conference  
September 28—October 2, 2014  
Flagstaff, Arizona



# Field Data Collection on a Tablet Using Quantum GIS



**Michael Barbour**

**Alabama Natural Heritage Program®**



**AU Museum of  
Natural History**



# Using Tablets for Field Data Collection:

How the MDC's Resource Science Division is using tablets for data collection.



Philip Marley &  
Joel Sartwell







# **SAFIS Anywhere: Development of a hand-held application for fisheries trip reporting**

OFWIM 2014 Conference and Annual Meeting  
Flagstaff, Arizona

**Julie Defilippi**  
**Senior Data Coordinator, ACCSP**

*Our vision is to be the principal source of fisheries-dependent information  
on the Atlantic coast through the cooperation of all program partners.*



# Connecting Hunters, Biologists, and Enforcement in a Mobile World

Joe Kirby

IT- Application Development Supervisor  
Missouri Department of Conservation

[Joe.kirby@mdc.mo.gov](mailto:Joe.kirby@mdc.mo.gov)

OFWIM Conference Flagstaff, AZ  
September 29th, 2014





**MOBILE AWESOMENESS** – HOW DO WE GET THERE?

**CHRIS GERECKE  
TIMMONS GROUP**





Environment  
Canada

Environnement  
Canada

Canada



# A CWS Data Security Model

Presentation to OFWIM

September 29, 2014

Presenter: Eric Woodsworth

Canadian Wildlife Service





# **Sharing data across regulatory and geographic boundaries improves landscape scale decision making**

2014 OFWIM Annual Conference  
September 29, 2014

Rebecca A. Scully, USGS/PNAMP  
Co- Author: Jacque Schei (USGS/PNAMP), Keith  
Steel (Sitka Technology Group)



pacific northwest aquatic  
monitoring partnership

OFWIM  
2014 Conference and Annual Meeting

Developing a  
National Fisheries Data Exchange  
Standard

Julie M. Defilippi, Atlantic Coastal Cooperative Statistics Program

Andrea C. Ostroff, U.S. Geological Survey

Thomas Litts, Georgia Department of Natural Resources

Jennifer M. Bayer, U.S. Geological Survey

Andrew Loftus, Loftus Consulting

Janice Gordon, U.S. Geological Survey



**Fisheries Information & Technology Section**  
AMERICAN FISHERIES SOCIETY





# Single Points of Failure in Data Management: *LESSONS LEARNED*

MaryEllen Wickett  
Maine Department of Inland Fisheries and Wildlife

# What will you remember about your data in 10 years?

*Preserving project documentation for the long term*

**2014 OFWIM Annual Conference**  
**September 29, 2014**

**Presented by: Jacque Schei (U.S. Geological Survey/PNAMP)**

Co-authors: Jennifer Bayer (U.S. Geological Survey/PNAMP), Keith Steele (Sitka Technology Group), Matt Deniston (Sitka Technology Group), Russell Scranton (Bonneville Power Administration)



pacific northwest aquatic  
monitoring partnership





## **Biodiversity Information Serving Our Nation: BISON**

**160+ million mapped species occurrences,  
50+ map layers includes ITIS-enabled search**

*A national unified resource for  
discovery, linkage, & reuse of species occurrence data*

**<http://bison.usgs.ornl.gov>**

**Annie Simpson**

**U.S. Geological Survey; Core Science Analytics, Synthesis, & Libraries (CSASL) Program  
Core Science Systems (CSS) Mission Area**

**ORGANIZATION OF FISH & WILDLIFE INFORMATION MANAGERS -- 30-September-2014**

**U.S. Department of the Interior  
U.S. Geological Survey**



# **ScienceBase Data Management Infrastructure**

**Presentation to Organization of Fish & Wildlife Information Managers**

September 30, 2014

Natalie Latysh

# National Fish Habitat Partnership Data System

Andrea C. Ostroff

Organization of Fish & Wildlife Information Managers

30 September 2014





## ***Species Conservation Analysis Tool***

A Compilation of  
State Wildlife Action Plans  
Species of Greatest Conservation Need

**Andrea Ostroff**

**Organization of Fish & Wildlife Information Managers**

**30 September 2014**





# CONNECTING CONSERVATION



**Griffin Groups™**

## OFWIM Intro and Update

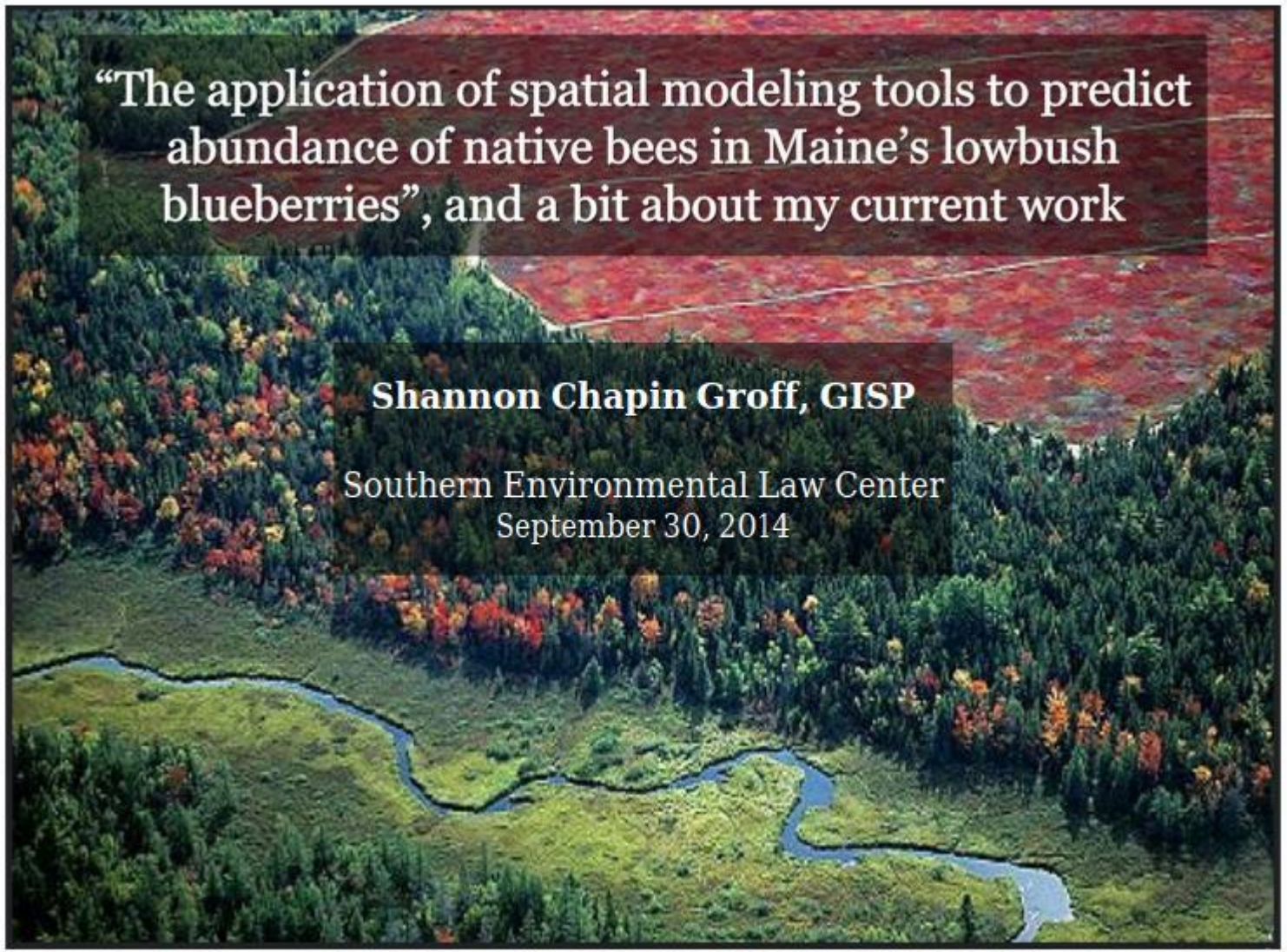
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September 30, 2014

**Edward J. Laurent, PhD**

Executive Director

[edlaurent@connectingconservation.org](mailto:edlaurent@connectingconservation.org)

An aerial photograph of a river meandering through a landscape. The river is a light blue-grey color, winding from the bottom left towards the bottom right. The surrounding land is covered in dense forest. On the left side of the river, the trees show vibrant autumn colors, including bright yellows, oranges, and reds. On the right side, the forest is predominantly green, with some patches of yellow and orange. In the upper right corner, there is a large, flat area that appears to be a field or a different type of vegetation, colored in a deep red or maroon hue. The entire image is framed by a white border.

“The application of spatial modeling tools to predict abundance of native bees in Maine’s lowbush blueberries”, and a bit about my current work

**Shannon Chapin Groff, GISP**

Southern Environmental Law Center  
September 30, 2014

# Data

# epiphany

**There's a word for that!**

**Keith Hurley  
Nebraska Game and  
Parks Commission**

# Technology Survey Results

By:

Philip Marley

Data Standards and Technology Trends Committee



# **Web Maps With Leaflet**

**Presented at the Annual Meeting of the  
Organization of Fish and Wildlife  
Information Managers**

**September 30, 2014  
Flagstaff, AZ**



Dyanne Cortez  
Texas Parks and  
Wildlife Department





# What is TRACS?

**Tim Smith**  
**States and Stakeholders Liaison**  
*Olympia, Washington*



*Tracking and Reporting  
Actions for the  
Conservation of Species*

**Program & Accomplishment  
Reporting Branch (PAR)**  
*Commerce City, Colorado*



**Wildlife and Sport Fish  
Restoration Program (WSFR)**  
*Falls Church, Virginia*



**U.S. Fish and Wildlife Service**  
*Washington DC*





NORTHERN  
ARIZONA  
UNIVERSITY

# NAU's New UAV Instrumentation

Temuulen "Teki" Sankey  
Assistant Professor  
Northern Arizona University



**Organization of  
Fish & Wildlife Information  
Managers**



**OFWIM Conference 2015**  
**Sunday, September 27, – Thursday, October 1, 2015**  
**Colonial Williamsburg Foundation**  
**Williamsburg, VA**  
[www.ofwim.org](http://www.ofwim.org)



This year's conference will be held near the heart of Colonial Williamsburg, a renowned living-history museum representing life in Colonial America. The beautiful historic district is full of quaint buildings, historic reenactments, and endless opportunities to enjoy the natural scenery. Along with the surrounding nearby attractions of Jamestown, Yorktown, Busch Gardens, and shopping, Colonial Williamsburg offers plenty to do during the off-time hours for you and the entire family! Williamsburg is located between Richmond and Norfolk on I-64. Conference attendees will have more than 200 daily flights from which to choose. There are three international airports, all within a 45-minute drive.





Organization of Fish and Wildlife Information Managers

# 2015 Williamsburg Virginia



# Welcome to Virginia



James Husband  
Fish & Wildlife Information  
Services/Permits Manager

OFWIM Conference  
September 28, 2015

# Wildlife Management From A 10,000 Foot View



**Bob Duncan**  
Executive Director, DGIF



## U.S Geological Survey (USGS)

### USGS Science Data Catalog - Meeting Open Data Requirements

OFWIM - September 28, 2015

Marcia McNiff  
for Mike Frame

USGS Chief Scientific Data Integration & Visualization





# Monitoring Explorer Online Map Viewer: Who is Monitoring What, Where, When and How?

September 28, 2015

***Rebecca Scully , Katherine Pierson and  
Jennifer M. Bayer***

*U.S. Geological Survey/ Pacific Northwest Aquatic Monitoring  
Partnership, Cook, WA*



pacific northwest aquatic  
monitoring partnership



# The Data Life Cycle: Making the Data Work for You

Organization of Fish and Wildlife Information Managers  
2015 Conference and Annual Meeting  
Williamsburg, VA

**Julie Defilippi**  
Data Team Leader, ACCSP



*Our vision is to be the principal source of fisheries-dependent information  
on the Atlantic coast through the cooperation of all program partners.*

# APPALACHIAN

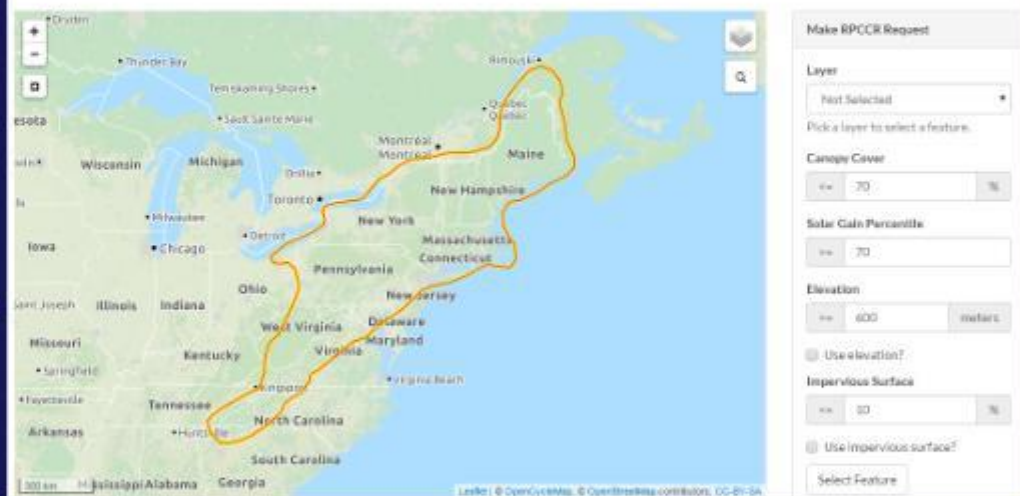
LANDSCAPE CONSERVATION COOPERATIVE

## Speaker



**Jessica Rhodes**  
Appalachian LCC  
GIS Analyst

### The Riparian Prioritization for Climate Change Resilience



LANDSCAPE  
CONSERVATION  
COOPERATIVES



# At-Sea Mobile Data Collection



**NOAA  
FISHERIES**

**TIMMONS GROUP**  
GEOSPATIAL SOLUTIONS

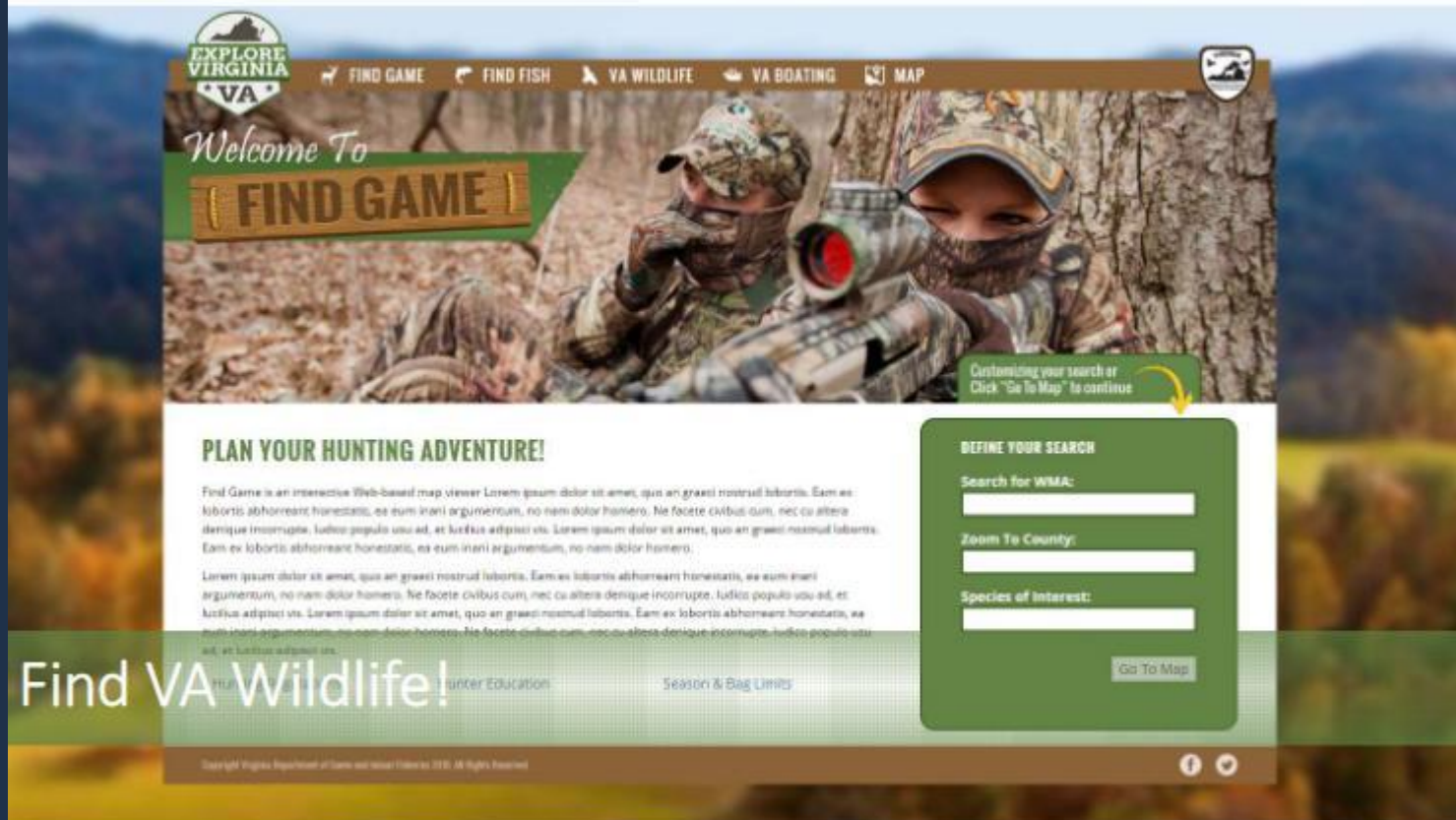


# Blue Marble Geographics



**Christian Ruenzi**  
*Senior Account Manager*

## Monitoring Seasonal Habitat Change Using NDVI Analysis in Global Mapper



**James Husband**  
**VA Dept. Game & Inland Fisheries**

**&**

**Lowell Ballard**  
**Timmons Group**

# Mobile Apps Today

Joe Kirby

Application Development Supervisor  
Missouri Department of Conservation





# Collecting GIS Data With Echo Smart Pen

Lynn Barrett

GIS Analyst

Tennessee Wildlife Resources Agency



# Assessing FINS for Virginia's Freshwater Fish Data

Karen M. Horodysky  
Virginia Department of Game and Inland Fisheries  
Henrico, VA



2015 OFWIM Annual Meeting  
Williamsburg, VA



# **A Tighter Line on Service Fish Records in the 21<sup>st</sup> Century**

**Presented at the Annual Meeting of the  
Organization of Fish and Wildlife  
Information Managers**

**September 29, 2015  
Williamsburg, VA**



**Dyanne Cortez, Ron Smith,  
and Danny Lewis  
Texas Parks and Wildlife**



## Here We Go

Database projects in resource agencies are messy. They are often expansions of existing projects which bring along their own baggage and expectations while living in an environment of constant change necessitating flexibility in design and execution. During 2014, we undertook the development of a new creel survey design, storage, and analysis system to replace a system that dates back over 25 years. To add to the difficulties, our creel methodologies are evolving and likely to change throughout the coming years. By separating the project into components, choosing the best tool for the job, and continuing forward with no small amount of faith and confidence, we have been able to move through the task of upgrading our creel database system. When working with messy projects ripe with difficulties, sometimes all that can be done is to step off the ledge. Here we go.

-----

### **Keith Hurley** - Nebraska Game and Parks Commission

Keith is a Fish and Wildlife Specialist – Database Manager with the Nebraska Game and Parks Commission. He holds a B.S. from South Dakota State University in Fish and Wildlife Science and a M.S. in Zoology (Fisheries Ecology) from Southern Illinois University in Carbondale. Current job duties include creation, maintenance, and operation of fisheries division databases; data-mining of divisional data stores; coordination of the statewide creel project; statewide fisheries research; fisheries human dimensions research; divisional oversight of IT budget and purchasing, and whatever other odd jobs that can be assigned that might possibly involve the use of electrons and a keyboard.

\*\*\*\*\*



# The Development and Piloting of a Real-Time, Mobile Seafood Dealer Reporting Application for SAFIS

Organization of Fish and Wildlife Information Managers  
2015 Conference and Annual Meeting  
Williamsburg, VA

**Presented by:**  
**Anna Webb**

**Massachusetts Division of Marine Fisheries**  
**[anna.webb@state.ma.us](mailto:anna.webb@state.ma.us)**



*Our vision is to be the principal source of fisheries-dependent information  
on the Atlantic coast through the cooperation of all program partners.*



# ASSESSING SPAWNING HABITAT FOR LAKE STURGEON *ACIPENSER FULVESCENS* BELOW TVA DAMS ON THE UPPER TENNESSEE RIVER

**Daniel Walker & J. Brian Alford**

Department of Forestry, Wildlife, and Fisheries

University of Tennessee - Knoxville

OFWIM - Williamsburg, VA - 29 Sept 2015



HYDRO  
RESEARCH  
FOUNDATION



What will you do with it?

Chris Burkett

Va Dept. of Game and Inland Fisheries

Sept. 29, 2015

# Achieving Business Aligned Information Technology

Kirk Keller – Enterprise Architect, University of Missouri – Columbia

Darren Chiappinelli – Managing Director, Sabot Consulting

# VIRGINIA

## Department of Game & Inland Fisheries Effective use of GIS & GPS in Law Enforcement



Presented by: Lenée Pennington, GISP





# Capturing Chaos



## A Relational Database to Track Species of Greatest Conservation Need

**Jason Czapiga**  
**Maine Department of Inland Fisheries & Wildlife**



# Using Python to Automate Production of Species Conservation Range Maps



Don Katnik  
Maine Department of Inland Fisheries and Wildlife

Organization of Fish & Wildlife Information Managers 2015 Conference  
Williamsburg, VA



**DISCLAIMER:** *I don't work for Python*



# Expediting multi-agency environmental review with species distribution models in Virginia and throughout the eastern U.S.

Jason Bulluck

Natural Heritage Information Manager  
Virginia Department of Conservation  
and Recreation



2015 Annual OFWIM Conference  
Williamsburg, Virginia



# An Overview of the Geographic Resource Analysis Support System (GRASS)

Donald L. Schrupp  
Wildlife Ecologist – CDOW (Retired)



"Turning Data Into Knowledge: Collecting Data to Implement Conservation"  
OFWIM 23<sup>rd</sup> Annual Conference & Business Meeting  
Williamsburg, Virginia      September 27-October 1, 2015







**Organization of Fish & Wildlife  
Information Managers**  
**2016 Annual Conference & Business Meeting**  
October 2 - 6, 2016  
Ponca State Park, Ponca, Nebraska

**IT'S  $\pi$  ABOUT Scale:**  
**Integration of Natural Resource Information**

# IOWA'S MASTER ANGLER PROGRAM - DIVING INTO AGILE SOFTWARE DEVELOPMENT HEAD FIRST

Jeff Kopaska

Iowa Department of Natural Resources

OFWIM 2016 Annual Conference

October 2 - 6, 2016

Ponca State Park, Ponca, Nebraska

# Tools for Tool Selection:

*Choosing hardware/software to  
meet Fish & Wildlife Project Needs*



Kristin Rogers  
Florida Fish and Wildlife  
Conservation Commission



Jason Smith  
Surveyor

Jes White  
Surveyor

Allen Will  
Surveyor

APPLICATION  
USERS

ArcGIS  
Collector

esri

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**MAKING THE  
"RIGHT" CHOICE**

- Place your bets on the best solution for your audience -

Chris Gerecke - Timmons Group





# A Tool for Identifying Potential Threats to Species on a Landscape Level



An example geared towards endangered freshwater mussels in Missouri

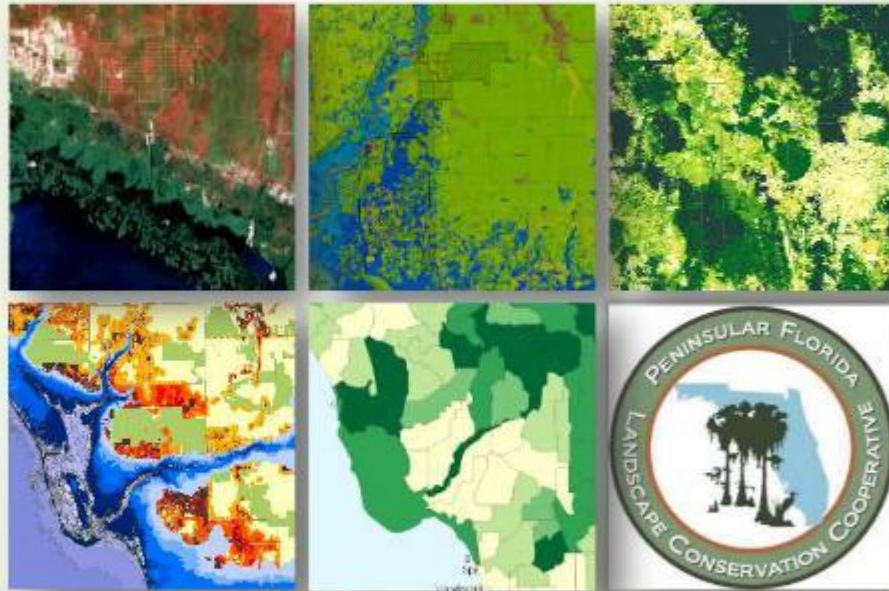
**Kayla Key**  
knkmr2@mail.missouri.edu

# MAPPING LAKE STURGEON SPAWNING HABITAT IN THE UPPER TENNESSEE RIVER USING SIDE SCAN SONAR



**Daniel J. Walker & J. Brian Alford**  
Department of Forestry, Wildlife, and Fisheries  
University of Tennessee – Knoxville  
3 Oct 2016

# Introducing the PFLCC Conservation Planning Atlas



**Beth Stys, Florida Fish & Wildlife  
Conservation Commission**



# MIT App Inventor



---

*Create your own Mobile Data Collection App  
using simple drag and drop technology*

*CarolAnne Feehan  
IT Business Analyst*





**How Deep Can Minds Go with the  
Computer Science Internships in  
Conservation Research: From Android  
Apps to Artificial Intelligence...  
and Solving Differential Equations Too.**

**Joel Sartwell**

**Systems Analyst, Missouri Department  
of Conservation (MDC)**

# Temperature monitoring Nebraska's coolwater streams and implications for future management



Brett Roberg  
Nebraska Game & Parks Commission  
[brett.roberg@nebraska.gov](mailto:brett.roberg@nebraska.gov)  
308-865-5329





# Online environmental review for protected species:

Challenges and lessons learned

Rachel Simpson

Nebraska Game and Parks Commission



# Texas Parks and Wildlife Drawn Hunts

**Jon Purvis**

**Texas Parks and Wildlife**

Organization of Fish and Wildlife

Information Managers

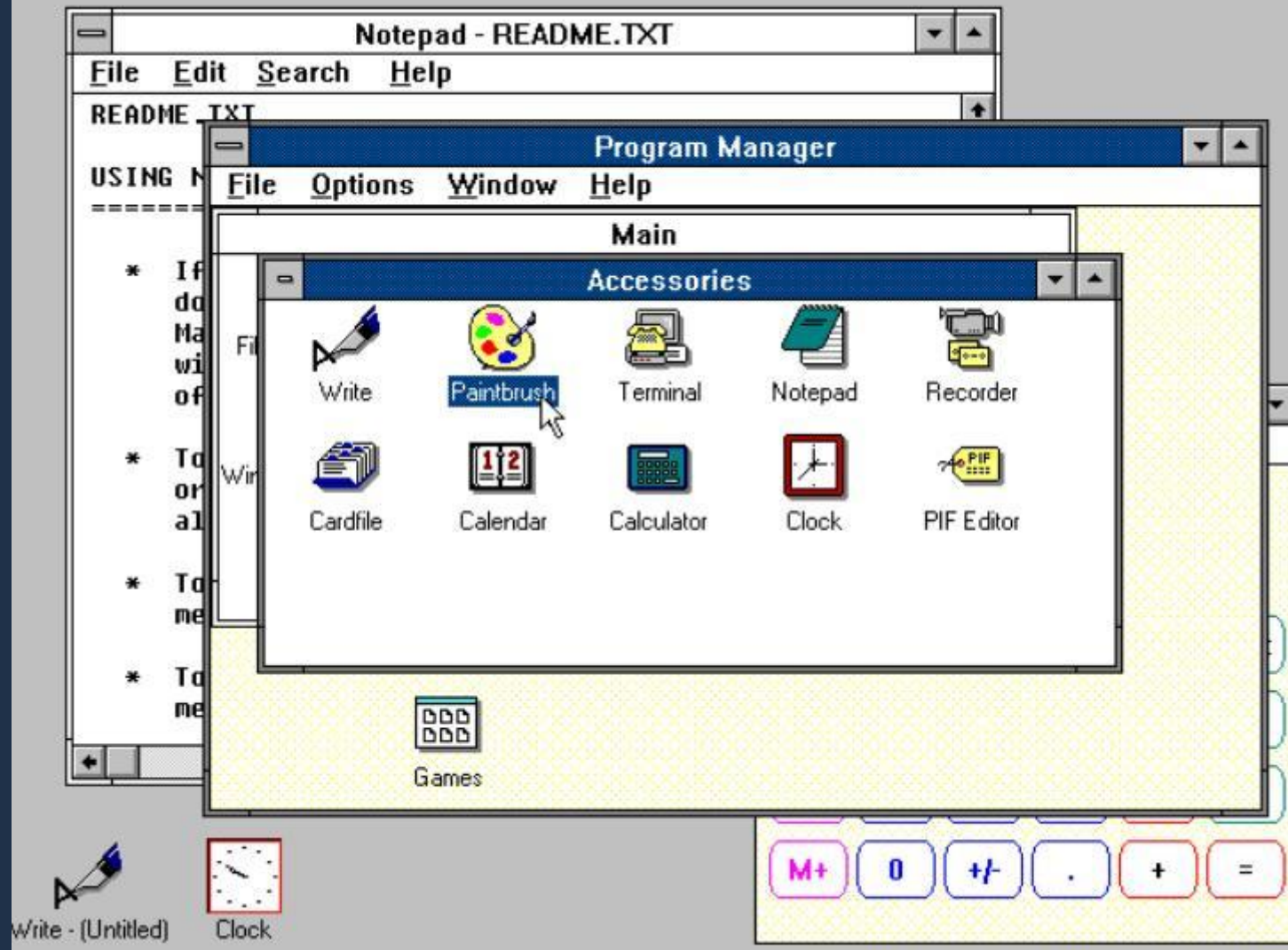
October 2016



# Waterfowl Hunting Daily Harvest Data Collection



Joe Kirby  
Enterprise Information Architect  
[Joe.kirby@mdc.mo.gov](mailto:Joe.kirby@mdc.mo.gov)



## Multitasking Myth Busting

Keith Hurley Nebraska  
Game & Parks  
Commission



# An analysis of Iowa's fishing license marketing efforts, 2005–2015

Jeff Kopaska

OFWIM 2016 Annual Conference

October 2 - 6, 2016

Ponca State Park, Ponca, Nebraska



# ArcGIS Collector

Lynn Barrett  
Tennessee Wildlife Resources Agency



# Are Survey Respondents Representative of the Population?



**Jon Purvis, Texas Parks and Wildlife**

Organization of Fish and Wildlife  
Information Managers  
October 2016

# Findings from a Search for R Spatial Analysis Support

Donald L. Schrupp – Wildlife Ecologist  
Colorado Division of Wildlife (Retired)



OFWIM 2016 ANNUAL CONFERENCE & BUSINESS MEETING  
*IT'S ALL ABOUT SCALE—INTEGRATION OF NATURAL RESOURCE INFORMATION*  
PONCA STATE PARK, PONCA, NEBRASKA



# A pheasant researcher notebook:

what we are learning about pheasants and pheasant hunters in Nebraska



**TJ Fontaine**

Nebraska Cooperative Fish and Wildlife Research Unit





# PRODUCTION QUALITY GRAPHICS AND CHARTS WITH R

## **2016 Webinars and Conference Workshop**

**Presenter: Dr. Chris Chizinski**

**University of Nebraska – Lincoln School of Natural Resources**

**October 6, 2016**

This workshop was held in conjunction with OFWIM's 2016 Conference at Ponca State Park, Nebraska. Recordings of two preparatory webinars are offered here, along with information on obtaining and installing the R software.





Organization of Fish & Wildlife  
Information Managers  
2017 Annual Conference & Business Meeting  
October 1-5, 2017  
Chattanooga, Tennessee

A Picture Is Worth 1,000 Words:

**SHOW DON'T TELL**

Displaying And Sharing Your Data In A Compelling Way



# **AMAZING TENNESSEE**

Míme Barnes  
Wildlife Information Specialist  
TWRA, Region 3

# **GIS Technology and Data Management – Partners or Foes?**

**More Issues for Database Managers and GIS Analysts**

**Pontification by: Jason Duke, USFWS**

**Organization of Fish and Wildlife Information Managers  
2017 Annual Conference  
Chattanooga, TN**



Content

Open

Mapping

# OFWIM – 2017 Annual Conference

## *What Does Web GIS Really Mean for Fish and Wildlife Agencies?*

Imagery

Spatial Analysis

**Mike Bialousz, Esri**

3D

Data Exploration

Real-Time

Visualization

Apps

Big Data

Data Management





# Data mining with grit: The case of youth multi-year fishing and hunting license holders

Susan Steffen  
Human Dimensions Specialist  
Fisheries Research



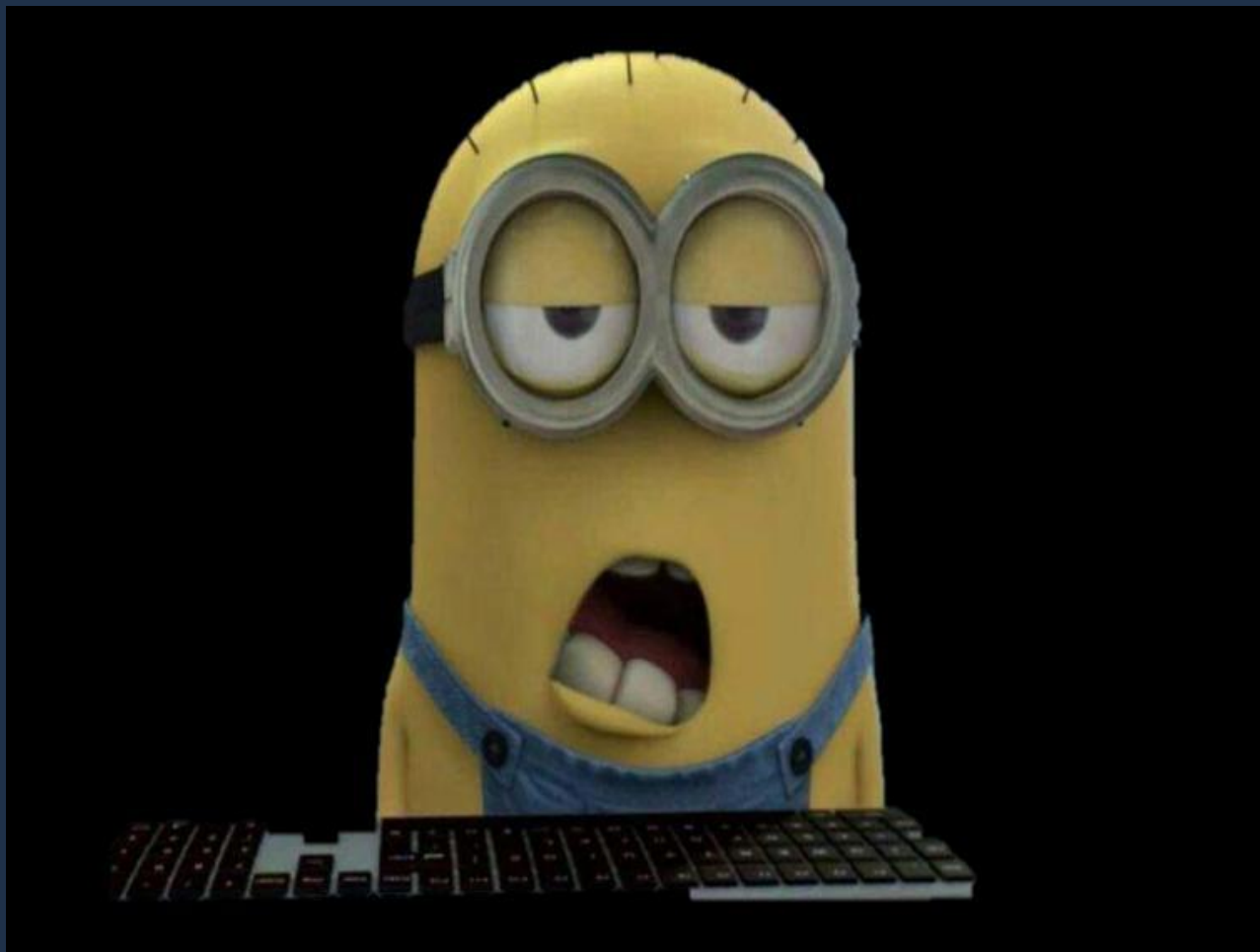
# High resolution aerial digital imagery to study natural and anthropogenic activity, and interactive data visualization

[jwillmott@normandeau.com](mailto:jwillmott@normandeau.com)

# Mobile Data Collection Using Collector for ArcGIS and Survey123



Michael Barbour  
Alabama Natural Heritage Program®



**Finding The Cure for Boredom**  
**Keith Hurley, Nebraska Game and Parks Commission**



# Can you See Paradise by the Dashboard Light?

Leveraging **R Shiny** to Create a Web-based Dashboard App for  
Efficient Data Processing and Rapid Visualization



Matthew King  
Sabra Tonn

AZ Natural Heritage Program

OFWIM 2017



**High Definition Stream Surveys: Rapid Data Collection for  
Integrating Fish Habitat, Channel Geomorphology, Water Quality,  
Water Quantity, and Infrastructure Surveys**



# REACTIVATION VS. RECRUITMENT

USING EMAIL TO SELL MORE LICENSES

Matt Burlingame  
Indiana Division of Fish & Wildlife



# On the Path to Mapping Riparian Communities Across the State of Arizona

Austin B. Smith





# EMPOWERING CITIZEN SCIENTISTS THRU GIS



# OFWIM

## Tools Inventory & Project Discovery Guide

**Karen Horodysky**

Virginia Department of Game  
and Inland Fisheries



**Matt Burlingame**

Indiana Department of  
Natural Resources



**Kristin Rogers**

Florida Fish and Wildlife  
Conservation Commission



... and the OFWIM Data Standards and Technology Trend Committee

# Developing "Best Practices" in Data Management, Data quality, and Data Integration of Big Data



John Barry Taylor



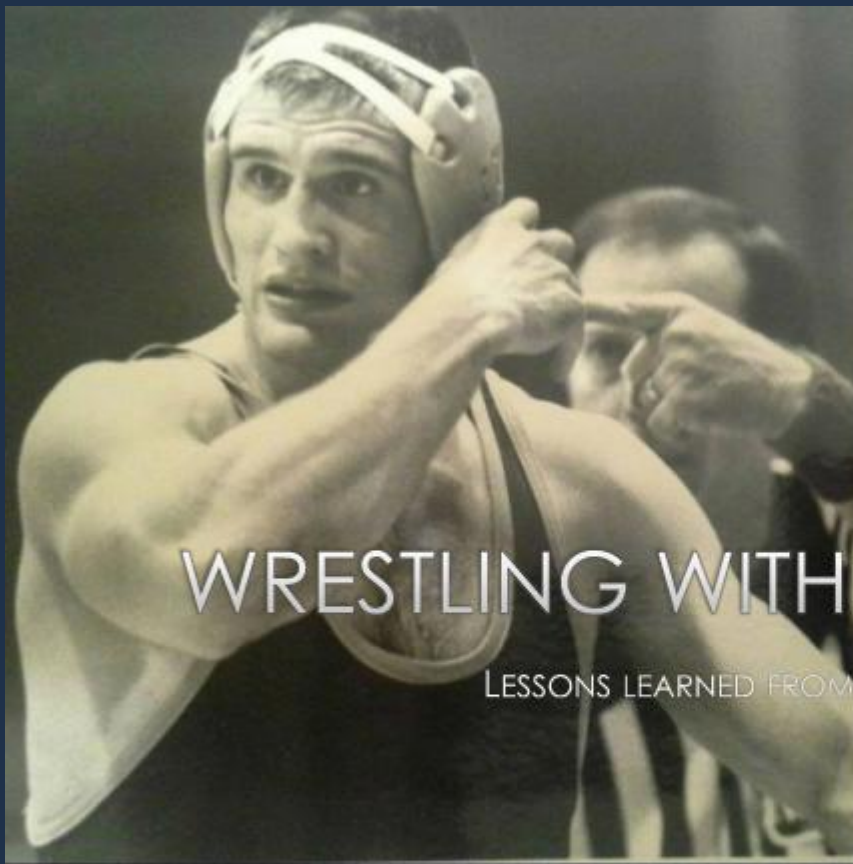
Department of  
Environmental  
Conservation

# Retaining and Reactivating NY Anglers

**Greg Kozlowski**

December 14, 2016





# WRESTLING WITH RECRUITMENT

LESSONS LEARNED FROM A COACH'S DESK

**Matt Burlingame, Indiana Department of Natural Resources**

# A user-friendly tool to identify potential threats to species on a landscape level



An example geared towards endangered freshwater mussels in Missouri

**Kayla Key**  
knkmr2@mail.missouri.edu

# Impact of Water Fluctuations and Intermittency on Stream Biota Community Structure

Isabel F Papraniku, Donald Walker, Joshua Perkin  
Tennessee Technological University





# Neutrophil:Lymphocyte Ratios as a Measure of Chronic Stress in Populations of the Hellbender (*Cryptobranchus alleganiensis*) Across a Habitat Quality Gradient



Allison Litmer and Christopher Murray  
Tennessee Technological University



# Ecologically Informed Water Management



**Emily Tracy-Smith<sup>1</sup>, Craig P. Paukert<sup>1,2,3</sup>, Nick Sievert<sup>1</sup>, Paul Blanchard<sup>4</sup>, Matt Combes<sup>4</sup>, Del Lobb<sup>4</sup>, and Jason Persinger<sup>4</sup>**

<sup>1</sup>School of Natural Resources, University of Missouri; <sup>2</sup>Missouri Cooperative Fish and Wildlife Research Unit; <sup>3</sup>U.S. Geological Survey; <sup>4</sup>Missouri Department of Conservation, Resource Science Center

# **Toolkit for Assessing and Monitoring Stream Channels and Riparian Corridors Using LiDAR**



**Dyan Pursell, GIS Specialist**





# SOUTH DAKOTA GAME, FISH and PARKS

The Creation of a Comprehensive Aquatic Database using  
a Commercial off-the-Shelf (COTS) Solution

Chelsea Krause, GIS Coordinator



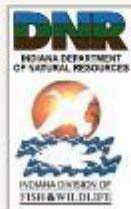
2017 Organization of Fish & Wildlife Information Managers Meeting  
Chattanooga, Tennessee

# Considering an Existing Application as a Solution for an Agency's Fisheries Database Needs



**Karen Horodysky**

Virginia Department of Game & Inland Fisheries



**Matt Burlingame**

Indiana Department of Natural Resources



# Setting Up and Deploying Geospatial Data Shares Using the QGIS Server Application

Donald L. Schrupp – Wildlife Ecologist  
Colorado Division of Wildlife (retired)



**The OFWIM 2017 Annual Conference and Business Meeting**  
**"A Picture is Worth 1000 Words: Displaying  
and Sharing Your Data in a Compelling Way."**  
**October 1 - 5, 2017** **Chattanooga, Tennessee**

# Lake Bathymetry Mapping with a Raspberry Pi and Open-Source Software

Powell Wheeler  
District Fisheries Biologist

Luke Etchison  
Aquatic Diversity Biologist



# **Aquatic Conservation at Different Spatial Scales**

Sarah Sweat

Tennessee Aquarium Conservation Institute  
Chattanooga, TN

# Accuracy Assessment of GPS Data from Mobile and Dedicated GPS Devices

Michael S. Barbour  
Alabama Natural Heritage Program®



## **Making a Map from Start to Finish**

Kurt Snider, U.S. Fish & Wildlife Service

### **Abstract:**

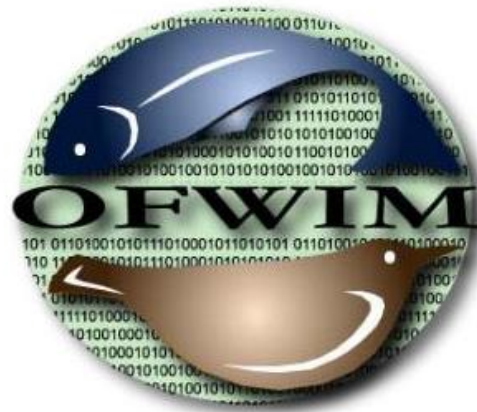
Follow instructors Kurt Snider and Lynn Barrett as they walk students through the process of creating a map layout in ArcGIS. Along with guiding you through the “how to” of navigating the layout tools in ArcMap, Kurt and Lynn will infuse nuggets of cartographic design theory, convention and tips to help you create maps and other outputs that are pleasing to the eye and communicate your message with efficiency. Basic knowledge of the ArcMap interface is preferred for this workshop. Bring your own laptop. ESRI is giving us temporary student licenses for ArcGIS Desktop, Editor level to install for this class.

### **Biography:**

Kurt Snider is a cartographer with the U.S. Fish and Wildlife Service in Cookeville, Tennessee. He has been with the Service for 23 years and spent the first 7 years of his career at the National Wetlands Inventory in St. Petersburg, Florida, mapping the wetlands of the United States.

Kurt helped develop and teaches a week-long cartographic design course for USFWS at their national training center as well as cartography at Tennessee Tech University in Cookeville.

Kurt also serves on the Tennessee Committee on Geographic Names. Kurt has a graduate degree in geography from the University of South Florida, has been married for 33 years and has 4 children. His interests outside of GIS and cartography include playing the drums and coaching lacrosse.



**November 4th - 8th**  
**Hood River, Oregon**

## **2018 OFWIM**

### **Annual Conference**

Partnered with



pacific northwest aquatic  
monitoring partnership



REELSONAR

# Social Fishing Apps: A New Data Collection Tool for Fisheries Management



**Dustin Martin, PhD Chief Data Scientist**

**402-840-2234 • [dustin@reelsonar.com](mailto:dustin@reelsonar.com)**

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# Updating the Biota Information System of New Mexico User Interface

**A Building Block of the New Mexico  
Conservation Information System**



**Ginny Seamster, Ph.D.**

*New Mexico Department of Game and Fish*

*OFWIM Meeting, November 4-8, Hood River, Oregon*





# A Tool for Data Consolidation and Standardization

Karen Horodysky  
2018 OFWIM Annual Meeting  
Hood River, Oregon  
5 November 2018



# Efficiency and Opportunities Gained with a Data Exchange API

GREG WILKE,  
PSMFC, STREAMNET PROJECT



# The Environmental Data Initiative's Ecological Data Management Training Program: The Experience of a Summer Fellow at Archbold Biological Station



By Gabriel Kamener  
2018 Summer Fellow, EDI



Research Data Assistant, Archbold Biological Station



FOUR PEAKS  
ENVIRONMENTAL  
Science & Data Solutions



# Improved Compliance Management through Data Integration and Automation

Sam Haffey, P.E., Four Peaks Environmental  
Science & Data Solutions

Nick Ackerman, Portland General Electric

Garth Wyatt, Portland General Electric

2018 OFWIM Annual Conference  
Hood River, Oregon



# Interagency Cooperation for Data Sharing

---

Working to Establish Electronic Data Sharing between USFS and Heritage Programs

Sabra Tonn, Arizona's HDMS





science for a changing world



# The Land Treatment Digital Library

Justin Welty, Michelle Jeffries, David Pilliod  
U.S. Geological Survey



## Managing Hosted ArcGIS Online Content

# SOUTH DAKOTA GAME, FISH and PARKS

Chelsea Krause, GIS Coordinator



# The Magic of Machine Learning



Keith Hurley

Nebraska Game & Parks Commission



# Introducing GeoOptix

Tools for Fueling Collaboration and Secure Environmental Data Management in the Cloud

Keith Steele

Founder and Chief Technical Officer

Sitka Technology Group



# Do freshwater mussel beds associate with lateral channel stability and channel controls?

Jordan N. Holtswarth

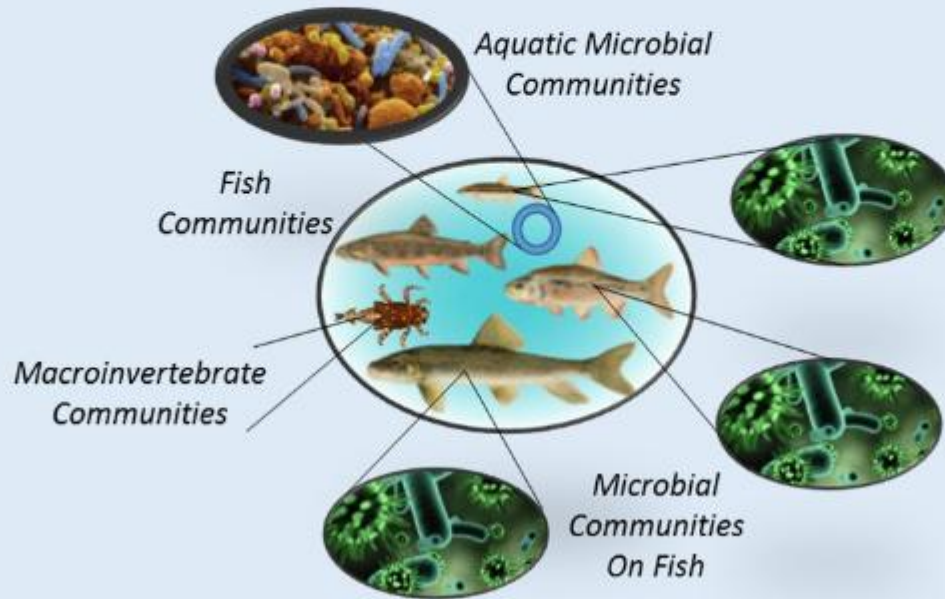
Tennessee Technological University, Tennessee Cooperative Fisheries Research Unit

Amanda Rosenberger

U.S. Geological Survey, Tennessee Cooperative Fisheries Research Unit



# Impact of Water Fluctuations and Intermittency on Stream Fish, Invertebrate, and Water Microbiota Community Structure



Isabel Papraniku, Donald Walker, Joshua Perkin

# Data Driven Decision Making with Visualization



Joe Kirby  
Enterprise Information Architect  
Missouri Department of Conservation  
[Joe.Kirby@mdc.mo.gov](mailto:Joe.Kirby@mdc.mo.gov)





we are  **ICF**

## Evaluation and prioritization of restoration actions in urban aquatic environments for salmonids under current and climate change conditions

Presented at OFWIM 2018

Laura E. McMullen, Jon Walker, and Chip McConnaha

November 7, 2018



# Bringing MOFEP into the 21<sup>st</sup> Century

---

Dyan Pursell

GIS Specialist

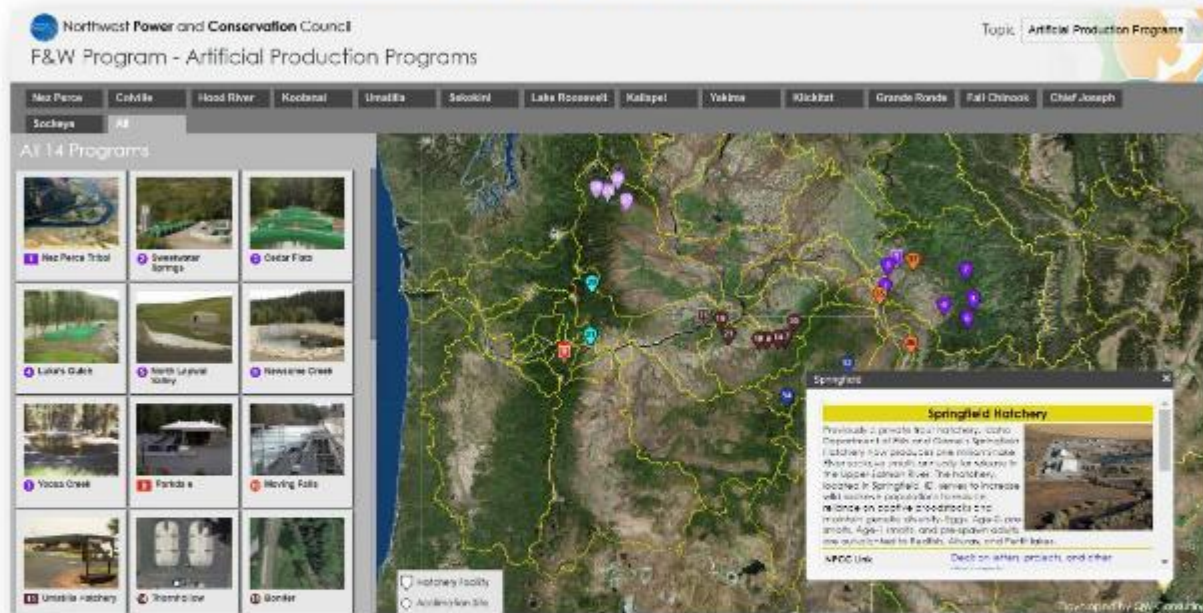
A photograph of a flock of birds, possibly Red-winged Blackbirds, flying over a vast, open landscape of dry, golden-brown grass. The birds are in various stages of flight, with wings spread, against a clear blue sky with a few wispy clouds. The foreground shows a path or stream cutting through the grass.

## **Using Deep Learning to Screen Time Lapse Pictures**

**Keith Hurley**  
Nebraska Game and  
Parks Commission



# The Power of ARCGIS Story Maps for Informing Decision-Makers



OFWIM November 2018

Nancy Leonard, PhD

Fish, Wildlife and Ecosystem Monitoring and Evaluation Report Manager





# Conservation Action Tracker

## *The COTS – Custom Mixer*

Chris Gerecke

# Species Habitat Distribution Maps to support Conservation Planning at a National Scale

Alexa McKerrow<sup>1</sup>, Kevin Gergely<sup>1</sup>, Ken Boykin<sup>2</sup>,  
Matt Rubino<sup>3</sup>, Nathan Tarr,<sup>3</sup> and Steve Williams<sup>3</sup>

<sup>1</sup> *United States Geological Survey – Core Science Analytics, Synthesis & Library*

<sup>2</sup> *Center for Applied Spatial Ecology, New Mexico State University*

<sup>3</sup> *Biodiversity and Spatial Information Center, North Carolina State University*

# Predicting High-Risk Wildfire Regions with K-Means clustering in Apache Spark



IAN DOWNARD

[idownard@mapr.com](mailto:idownard@mapr.com)



2018 OFWIM Annual Conference  
Hood River, Oregon

# Building Wildlife Habitat Models with Cloud-based Mapping Techniques

November 7, 2018  
Hood River, OR

James R. Hatten  
Research Biogeographer,  
USGS, WFRC, Columbia River Research Lab,  
Cook, WA 98605  
E-mail-- [jhatten@usgs.gov](mailto:jhatten@usgs.gov)





**The Nonindigenous Aquatic Species  
Flood and Storm Tracker**  
forecasting spread of nonindigenous aquatic species  
from hurricane storm surge and flooding

**Matthew Neilson**

**U.S. Geological Survey, Nonindigenous Aquatic Species Program  
Wetland and Aquatic Research Center, Gainesville, FL**



# **Survey123 and Collector for ArcGIS – What's New?**

Matt Taraldsen  
Solutions Engineer

# Mapping & Quantifying Xeroriparian Across the Arid Deserts

Arizona Game & Fish Department  
Austin B. Smith







# Underwood In-Lieu Navigation & Restoration Project





# OFWIM 2019

National Conservation Training Center, Shepherdstown, WV  
6-10 October 2019



**Knowledge Is Power:  
Technology to Address  
Emerging Conservation Challenges**

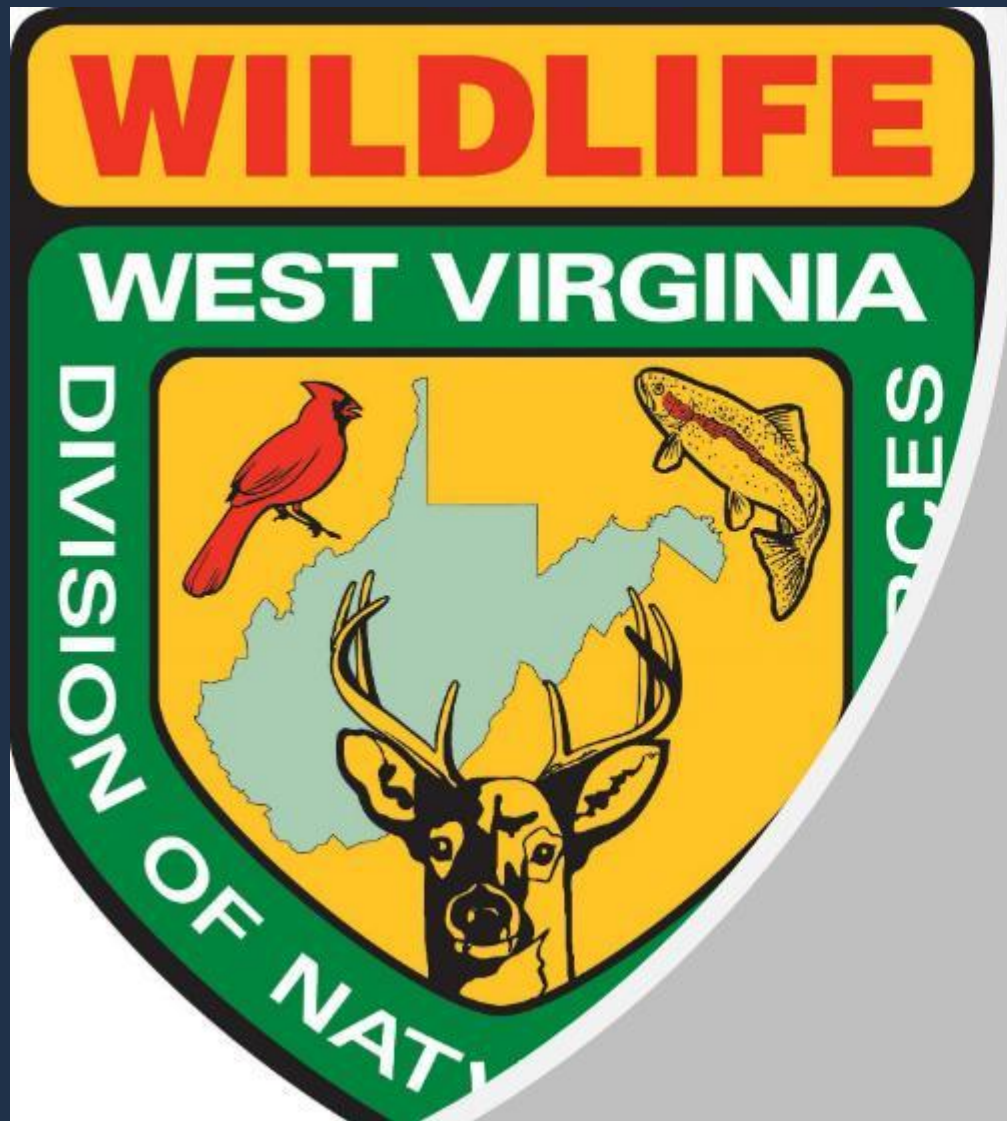
<https://www.regonline.com/ofwim19abstracts>



[www.ofwim.org](http://www.ofwim.org)

# OFWIM Annual Conference

## 6-10 October 2019



# *Wild & Wonderful West Virginia*

Mack Frantz, PhD, WVDNR Zoologist

Brandy Bachman, WVDNR GIS Technician

DEPARTMENT OF THE INTERIOR  
U.S. Fish and Wildlife Service



**NATIONAL  
CONSERVATION  
TRAINING  
CENTER**



# Training Overview

## **Decision Analysis and Ecological Adaptation**

Christy Coghlan  
NCTCCourse Coordinator

# DATA SHARING

## PARTNERSHIP, COLLABORATION & ETHICAL OBLIGATION

@UVADATASCIENCE

ARLYN BURGESS

OCTOBER 7, 2019

ARLYN.BURGESS@VIRGINIA.EDU



SCHOOL *of* DATA SCIENCE





Beth Stys, Florida Fish and Wildlife Conservation Commission



## Climate Adaptation Explorer

*for Florida*



Conservation  
Biology Institute





## Conservation Opportunity Area Tool

Organization of Fish and Wildlife Information Managers Conference  
Shepherdstown, WV ▪ 6-10 October 2019

*Rick Schneider<sup>\*1</sup>, Lori Scott<sup>1</sup>, Catherine Haffner<sup>2</sup>, Diana Day<sup>3</sup>,  
Christopher Tracey<sup>4</sup>*

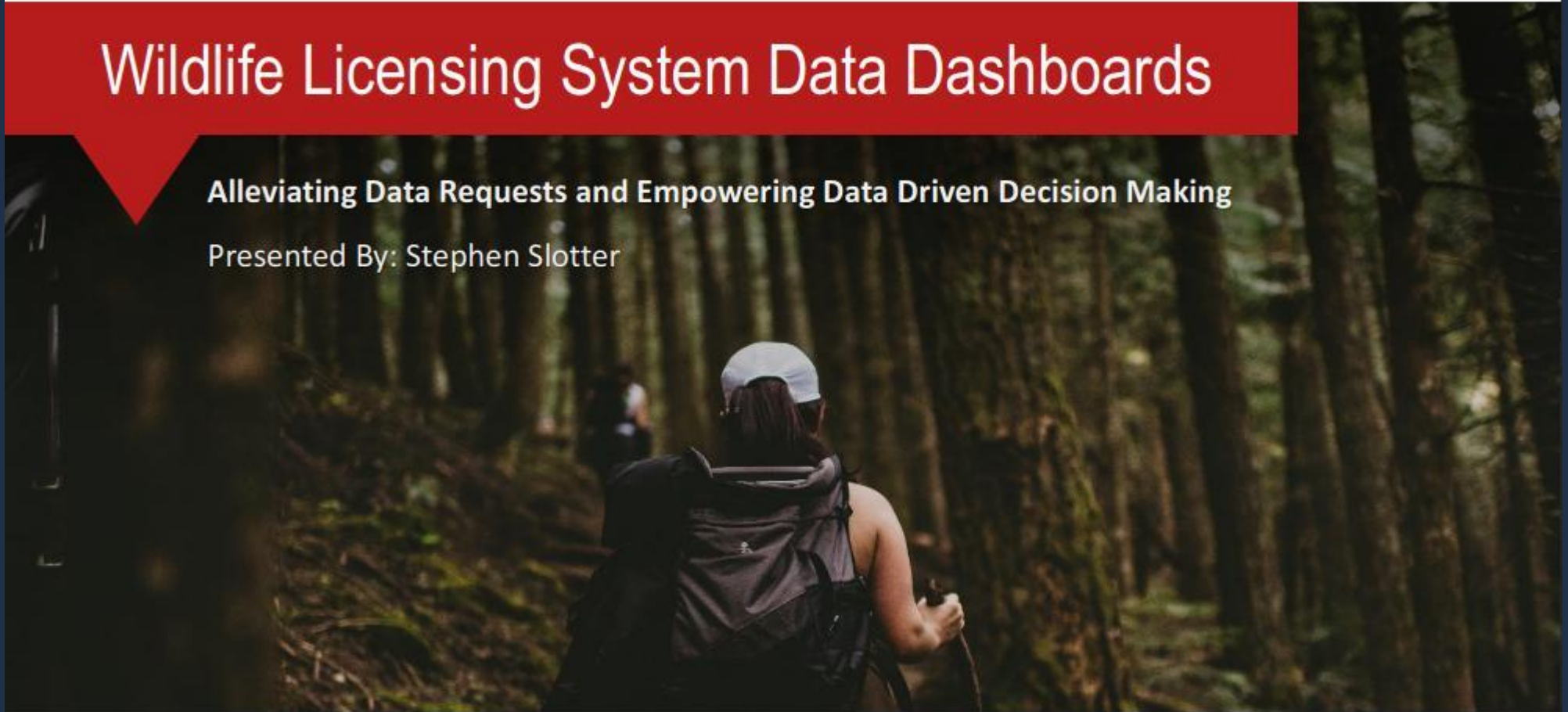
<sup>1</sup>NatureServe, <sup>2</sup>Pennsylvania Game Commission, <sup>3</sup>Pennsylvania Fish and Boat Commission, <sup>4</sup>Pennsylvania Natural Heritage Program



# Wildlife Licensing System Data Dashboards

**Alleviating Data Requests and Empowering Data Driven Decision Making**

Presented By: Stephen Slotter





# ArcGIS Solutions for R3: Leverage ArcGIS Maps & Apps to Increase Participation

2019 OFWIM Conference

Mike Bialousz

GIS  
INSPIRING  
WHAT'S  
NEXT



# Field Guide to Freshwater Fishes of Virginia

Paul Bugas  
OFWIM  
October 7, 2019

© 2017 Derek Whetzel  
Enduring Endurance  
Photography

# Database Management of the VIMS The Nunnally Ichthyology Collection



**Dr. Sarah Huber**

Curatorial Associate and Collection Manager  
Virginia Institute of Marine Science



# Keith Hurley

The Lies We  
Tell Ourselves

Nebraska Game and Parks Commission





Dr. Daniel McGarvey  
Center for Environmental Studies  
Virginia Commonwealth University

# Look at Me

I have something I want  
to share with you



# ASSESSING THE TRANSFERABILITY OF A FRESHWATER MUSSEL FUNDAMENTAL NICHE MODEL WITHIN THE OZARK ECOREGION, MISSOURI.

Jordan N. Holtswarth, Amanda Rosenberger, Kayla Key, Garth Lindner





# Effects of Land-use change and non-native species on native fish species abundance patterns and biotic homogenization in the New River Basin

Logan J. Sleezer

M.S. Student

Department of Fish and Wildlife Conservation

Virginia Polytechnic Institute and State University



# Modeling Fundamentally Suitable Freshwater Mussel Habitat Duck River Drainage, Tennessee



# "WEED" Data Acquisition Software

*Wildlife Environment for Electronic Data*

**VIMS** Fisheries Environment for Electronic Data LOBS WH House V04\_03

**TRIP**  
Cruise:  Vessel:  Lake:  Serial Seed:  Trawl Depth:

**SERIAL**  
**NEW SERIAL**  
Sample Type:  Serial:  Off Date:  **DUP. PREVIOUS**  
Bottom Type:  Target:  Weather:  Sea Cond'n:  Time Left:   
Secchi:  Port:  Location:  Trawl ID:   
Remarks:  End DT:  Touchdown (DD-MM-YY):

**OP BEGIN**  
**OP BEGIN** GPS Time:  EST:  Lat:  Lon:  **OP LIST**  
GPS Spd:  Heading:  Surf Temp:  T. Method:   
WindSpd mph:  WindDir°:  BagDepth(m):  StationDepth:

**OP END**  
**OP END** GPS Time:  EST:  Lat:  Lon:   
Heading:  EndDepth(m):

**TRAWL OP**  
Set Time:  Speed:  FishDepth(m):  Tow Dir.:  **DUP. PREVIOUS**  
Type Set:  TRL Design:  TRL Size:  Trawl ID:  Fish Temp:  Warp:

*Chris Bonzek*  
*Virginia Institute of Marine Science*

*OFWIM Annual Meeting*  
*October 2019*



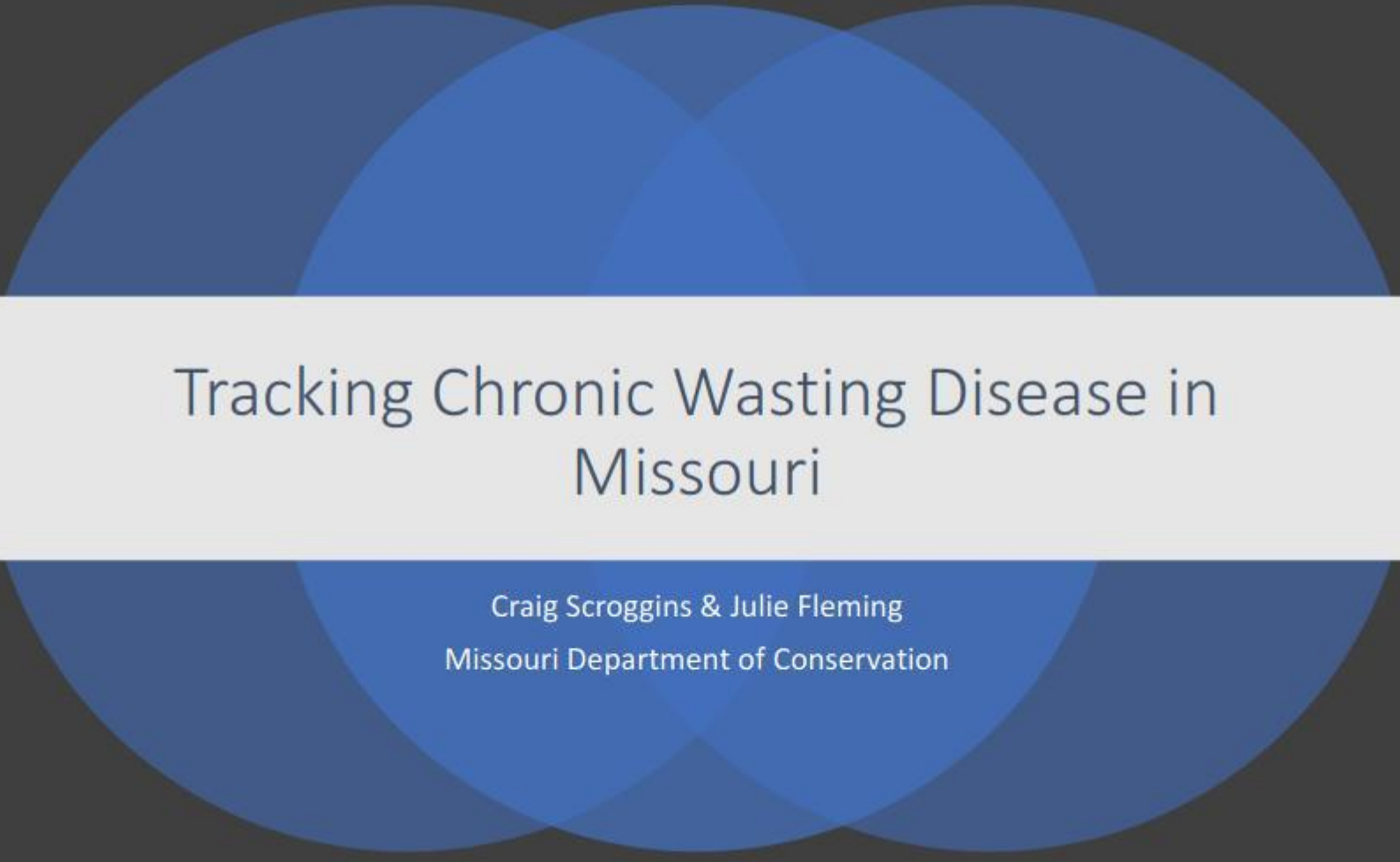


## eMammal as a an example of a data pipeline, repository, and outreach tool for wildlife images and metadata



Smithsonian Institution





# Tracking Chronic Wasting Disease in Missouri

Craig Scroggins & Julie Fleming  
Missouri Department of Conservation

# Making In-Stream Tributary Data Findable, Accessible, Interoperable and Reusable (FAIR)

Rebecca Scully, USGS/PNAMP

October 9, 2019







# ArcGIS Field Mobility Tools – What's New?

Mike Bialousz

SEE  
WHAT  
OTHERS  
CAN'T



# Florida Fire Occurrence database and web application

Beth Stys

Florida Fish and Wildlife Conservation Commission

<https://flcpa.databasin.org/>



# iMapInvasives 3: Updating a Collaborative Invasive Species Data Management Tool



**Michael Barbour**

**Arizona Heritage Data Management System**



# **New frontiers for "big data" in fish biology and climate change research**

|                                    |                                                  |
|------------------------------------|--------------------------------------------------|
| Nathaniel (Than) Hitt <sup>1</sup> | <sup>1</sup> USGS Leetown Science Center         |
| Craig Snyder <sup>1</sup>          |                                                  |
| John Young <sup>1</sup>            | <sup>2</sup> US Forest Service and Virginia Tech |
| Karli Rogers <sup>1</sup>          | Department of Fish and Wildlife Conservation     |
| C. Andrew Dolloff <sup>2</sup>     |                                                  |
| Nicholas Polys <sup>3</sup>        | <sup>3</sup> Virginia Tech                       |
|                                    | Advanced Research Computing Group                |

# **Use of Predicted Suitable Habitats of Rare Species in an Environmental Review Tool**

**Joe Weber**

Virginia Department of Conservation and Recreation  
Division of Natural Heritage



# **Georeferencing a Map in QGIS: a Brief Tutorial**

Donald L. Schrupp – Wildlife Ecologist  
Colorado Division of Wildlife (retired)



OFWIM 2019 Annual Conference

October 6th - 10th, 2019

National Conservation Training Center, Shepherdstown, West Virginia

Knowledge Is Power: Technology to Address Emerging Conservation Challenges

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# Telling your agency's story

*"From the Field to the Dashboard"*

Chris Gerecke | Principal  
Timmons Group  
[chris.gerecke@timmons.com](mailto:chris.gerecke@timmons.com)

# THE BIODIVERSITY AND ECOSYSTEMS A-16 THEME: RESPONDING TO NEW GUIDANCE



*OFWIM - October 9, 2019*

*Marcia McNiff/USGS*

*Biodiversity and Ecosystems Theme Lead*

# Practical Uses of iNaturalist, eBird, and Other Online Observations



Lindsey Wise

Oregon Biodiversity Information Center, Portland State University

October 2019, National Conservation Training Center, West Virginia





# What you probably didn't know about Biodiversity Information Serving Our Nation (BISON) and the Integrated Taxonomic Information System (ITIS)

Dr. Stinger Guala

USGS Core Science Systems, Science Analytics and Synthesis

9 Oct. 2019





### Workshops - October 10

#### Workshop 1: Communicating Science

*Instructors: Patty Raun & Dr. Carrie Kroehler, The Center for Communicative Science (VT)*  
*Location: The Gallery, NCTC*  
*Time: 8:00 AM - 12:00 PM*

**Description:** The Center for Communicative Science creates and supports opportunities for scientists, scholars, health professionals, and others to develop their abilities to communicate and connect. This hands-on workshop will get participants out of their seats as they use techniques from theater and improvisation to communicate.

##### Meet the Instructors:



**Patty Raun** is a professional actor and voice coach, a theatre professor, and Director of the Center for Communicative Science at Virginia Tech. She served as department head of Theatre and as director of the School of Performing Arts at Virginia Tech from 2002-2016. Ms. Raun recently shifted the focus of her research and teaching to sharing the powerful tools of the theatre in the development of communication skills for scientists, technology professionals, and scholars - helping them to discover ways to become more direct, personal, spontaneous, and responsive.



**Dr. Carrie Kroehler** is a biologist, writer, editor, instructor, and Associate Director of the Center for Communicative Science at Virginia Tech. Most of her work has focused on translating research for non-scientists. She hopes that we can bridge the gaps between us so that we can listen to and learn from one another as we transform our global society into one that sustains all of us and our beautiful, threatened, life-supporting earth.

##### Preregistered Participants:

|                   |                 |              |                   |
|-------------------|-----------------|--------------|-------------------|
| Lynn Barrett      | Karen Horodysky | Becca Scully | Susan Watson      |
| Amy Ewing         | Jim Husband     | Beth Stys    | MaryEllen Wickett |
| Jordan Holtzworth | Marcia McNiff   | Sabra Tonn   | Lindsey Wise      |



### Workshops (continued)

#### Workshop 2: Herp Tracking & Technology

*Instructor: Kevin Oxenrider, West Virginia Division of Natural Resources*  
*Location: Leetown Science Center*  
*Departure Time: 7:45 am at the Commons Circle*  
*Return Time: 12:00 PM*

**Description:** Participants will travel to a nearby wetland study site where WV DNR biologists are actively studying turtles by radio telemetry using VHF transmitters to learn how spatial data are collected in the field and gain a better understanding of additional data that accompanies location information. The classroom portion of this workshop will explain how spatial data are analyzed and used to develop conservation strategies. Participants should wear field appropriate clothing and waterproof footwear (knee boots are preferred).

##### Meet the Instructor: Kevin Oxenrider is the West Virginia State Amphibian and Reptile



Conservation Leader with the West Virginia Division of Natural Resources. He leads and oversees conservation initiatives and research for WV's amphibian and reptiles, as well as serves on regional and national working groups and committees to promote amphibian and reptile conservation at broader spatial scales. He has been with the WVDNR since 2016, but has spent time previously working with a number of wildlife species across the US, including bats, shorebirds, and prairie chickens. Kevin holds a M.S. in Ecology from Frostburg State University in Frostburg, MD, and completed doctoral work, also in ecology, at The Ohio State University, in Columbus, OH.

##### Directions to Leetown Science Center (13 miles, ~ 20 minutes from NCTC)

*Address: 11649 Leetown Rd, Kearneysville, WV 25430*  
 Turn left onto **Shepherd Grade Rd** as you leave the NCTC. After 3.3 miles, turn right onto **WV-480 S**. This road turns into **Leetown Rd**. The destination will be on your right in about 10 miles.

##### Preregistered Participants:

|               |                 |              |               |
|---------------|-----------------|--------------|---------------|
| Brittany Bajo | Kyle Kaskie     | Dyan Pursell | Annie Simpson |
| Liz Clark     | Heather Konell  | Don Schrupp  | Joe Weber     |
| Mack Frantz   | Jessica Perkins | Ross Scott   |               |
| Keith Hurley  | Leslie Pitt     | Liz Sellers  |               |

**Thanks to:**

**OFWIM Conference Presenters . . .**

**Dyanne Cortez - OFWIM Web Master . . .**

(Texas Parks & Wildlife - retired)

**Greg Wilke - OFWIM Website Support**

(Pacific States Marine Fisheries Commission)

**Visit: <http://www.ofwim.org/meetings/conference-archives/>**



ORGANIZATION OF FISH &  
WILDLIFE INFORMATION  
MANAGERS

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**VIRTUAL CONFERENCE &  
BUSINESS MEETING**

October 5-6, 2020

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