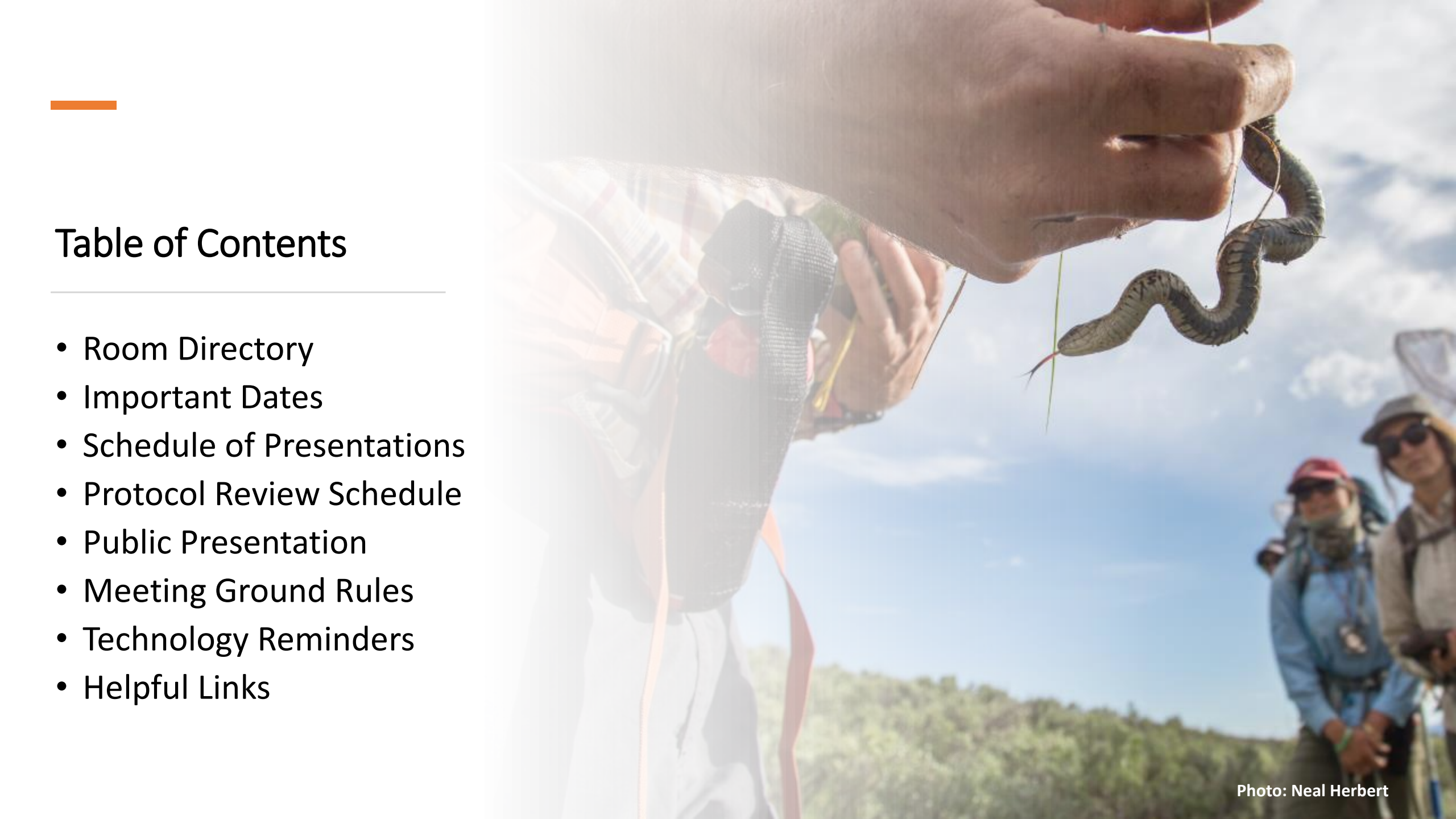




Photo: Chuck Peterson

**Linking Monitoring and Research to Amphibian  
Conservation in the GYE  
December 8, 9, 10 2020**

A photograph of a person holding a snake by a string, with other people in the background. The person holding the snake is wearing a plaid shirt and a black bag. The snake is coiled around the string. In the background, two other people are visible, one wearing a red hat and the other wearing sunglasses. The background is a bright, sunny outdoor setting with a blue sky and green foliage.

## Table of Contents

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- Room Directory
- Important Dates
- Schedule of Presentations
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- Public Presentation
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- Technology Reminders
- Helpful Links

# Room Directory

## Turner Auditorium

Phone Conference ID: 968 469 700#

### Yellowstone Lobby

Phone Conference ID: 320 671 569#

### Grand Teton Lobby

Phone Conference ID: 274 285 713#

### Spotted Frog Room

Phone Conference ID: 566 407 245#

### Western Toad Room

Phone Conference ID: 752 672 619#

### Chorus Frog Room

Phone Conference ID: 925 179 747#

### Tiger Salamander Room

Phone Conference ID: 185 159 198#

**Call in (audio only): (202) 640-1187 and enter  
a phone conference ID number from above**

Contact Jana Cram [jana\\_cram@nps.gov](mailto:jana_cram@nps.gov) and Andrew  
Ray [andrew\\_ray@nps.gov](mailto:andrew_ray@nps.gov) with questions

## Tuesday 8 December

- Welcome
- History of Amphibian Monitoring in the GYA
- Monitoring Presentations
- Updating the Amphibian Field Guide (Afternoon Conversation)
- Evening Social 

## Wednesday 9 December

- Research Presentations
- Ecological Indicators Special Issue (Afternoon Conversation)

## Thursday 10 December

- Update of GRYN's Amphibian Monitoring Program
- Discussion with Reviewer Panel
- Public Presentation 3:00-4:30PM  
– enroll here: [\*Ecological Insights From 70 Years of Greater Yellowstone Amphibian Studies\*](#)



## Important Dates

- **December 4** – Technology Test (info forthcoming)
- **December 8** – Monitoring Presentations
- **December 9** – Research Presentations
- **December 10** – Protocol Review and Public Presentation

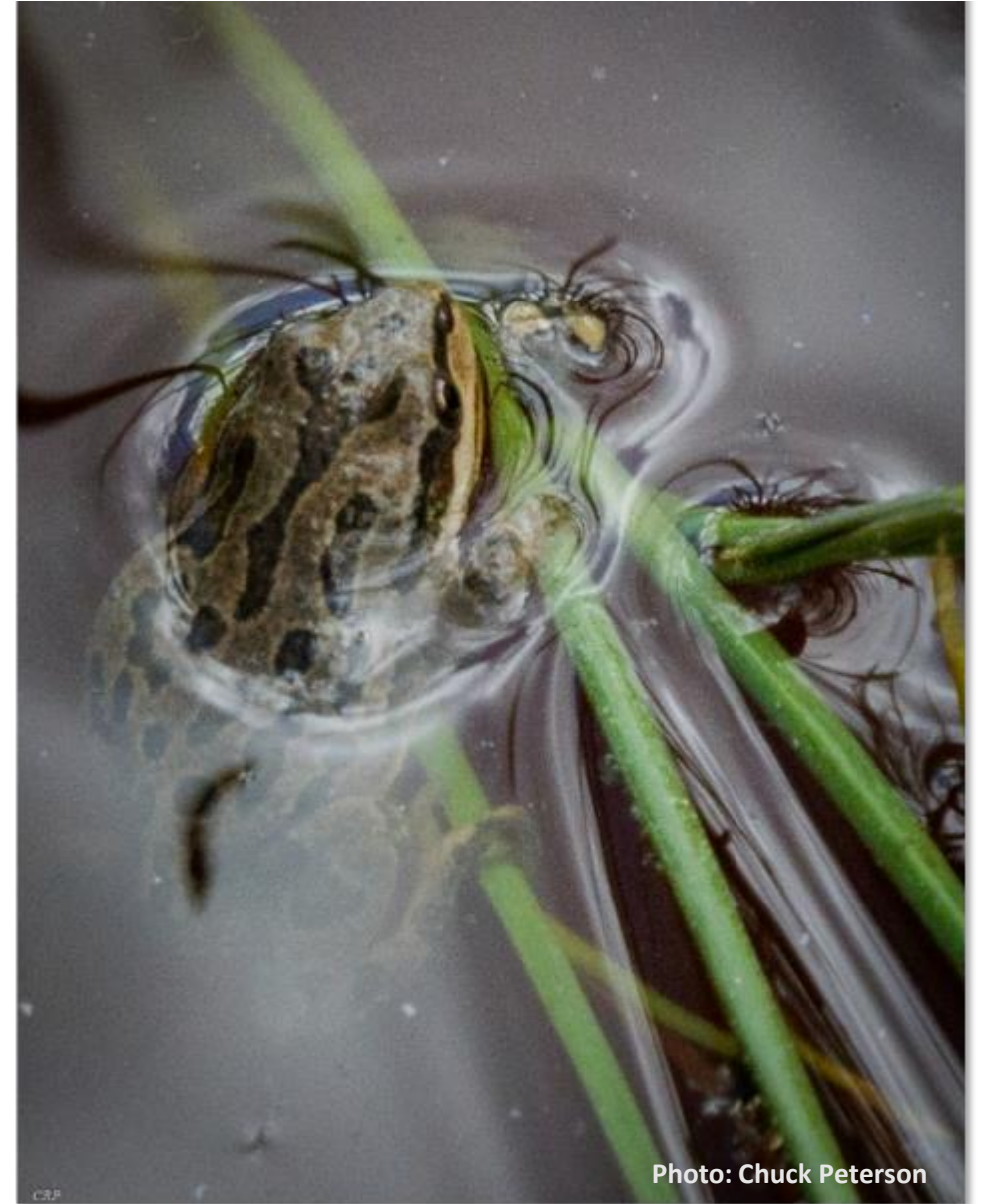


Photo: Chuck Peterson

# Schedule of Presentations

| Time           | Tuesday 8 December 2020 – <a href="#">Turner Auditorium</a>                                                                                |                                                      |                                                  |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|--------------------------------------------------|
| 9:00 to 9:15   | Welcome – Andy Ray                                                                                                                         |                                                      |                                                  |
| 9:15 to 9:30   | A Brief History of Amphibian Monitoring in the GYA<br>– Chuck Peterson & Andy Ray                                                          |                                                      |                                                  |
| 9:30 to 9:45   | Rocky Mountain Amphibian Project – Wendy Estes-Zumpf                                                                                       |                                                      |                                                  |
| 9:45 to 10:00  | Environmental DNA Monitoring: combining eDNA and visual surveys to monitor amphibian populations – Melanie Murphy                          |                                                      |                                                  |
| 10:00 to 10:30 | Coffee Break                                                                                                                               | Peterson & Ray<br><a href="#">Spotted Frog Room</a>  | Murphy<br><a href="#">Chorus Frog Room</a>       |
|                |                                                                                                                                            | Estes-Zumpf<br><a href="#">Western Toad Room</a>     | <a href="#">Tiger Salamander Room</a>            |
| 11:00 to 11:15 | Using crowdsourced data to monitor GYA's Amphibians and Reptiles – Chuck Peterson & Dan Glitz                                              |                                                      |                                                  |
| 11:15 to 11:30 | Status Assessments for Montana Amphibians – Bryce Maxell & Dan Bachen                                                                      |                                                      |                                                  |
| 11:30 to 11:45 | Research and long-term monitoring of a spotted frog population at Lodge Creek, Yellowstone, 1953-2020: lessons and questions – Debra Patla |                                                      |                                                  |
| 11:45 to 12:00 | Yellowstone's amphibian disease surveillance program – John Treanor                                                                        |                                                      |                                                  |
| 12:00 to 1:00  | Lunch Break                                                                                                                                | Peterson<br><a href="#">Spotted Frog Room</a>        | Patla<br><a href="#">Chorus Frog Room</a>        |
|                |                                                                                                                                            | Maxell & Bachen<br><a href="#">Western Toad Room</a> | Treanor<br><a href="#">Tiger Salamander Room</a> |

| Time         | Tuesday 8 December 2020 – <a href="#">Turner Auditorium</a>                                                                                                   |                                                |                                                |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|
| 1:00 to 1:15 | Reconstructing Wetland Hydrographs in Yellowstone's Northern Range – Meghan Halabisky & Andy Ray                                                              |                                                |                                                |
| 1:15 to 1:30 | The Rise and Fall of Northern Range Wetlands: How Hydroclimate and Geomorphology Influence Wetland Habitats Through Time – Derek Schook & David Cooper        |                                                |                                                |
| 1:30 to 1:45 | Invasive American Bullfrogs in Kelly Warm Spring, Grand Teton NP and <b>BRIEF UPDATE:</b> Culvert Retrofit to Facilitate Western Toad Migration – Chad Whaley |                                                |                                                |
| 1:45 to 2:00 | Multistate occupancy modeling improves understanding of salamander breeding dynamics in the GYA – Bill Gould                                                  |                                                |                                                |
| 2:00 to 2:30 | Break                                                                                                                                                         | Halabisky<br><a href="#">Spotted Frog Room</a> | Whaley<br><a href="#">Chorus Frog Room</a>     |
|              |                                                                                                                                                               | Schook<br><a href="#">Western Toad Room</a>    | Gould<br><a href="#">Tiger Salamander Room</a> |

**This marks the end of the formal Amphibian Symposium presentations for today.**

**If interested, please consider participating in the afternoon and evening events listed below.**

|              |                                                                                                                                 |
|--------------|---------------------------------------------------------------------------------------------------------------------------------|
| 3:00 to 4:00 | Updating the amphibian and reptile field guide for GTNP and YNP – Small Group Conversation in <a href="#">Western Toad Room</a> |
|--------------|---------------------------------------------------------------------------------------------------------------------------------|

|            |                                                                                                      |
|------------|------------------------------------------------------------------------------------------------------|
| 6:00 to ?? | Social – meet in <a href="#">Turner Auditorium</a> for GYA slide show and then visit with colleagues |
|------------|------------------------------------------------------------------------------------------------------|



You are encouraged to take coffee breaks and lunch in the Lobbies or any Amphibian Rooms for unscheduled discussions. We will have a few individuals assigned to a specific room during coffee breaks. Please check the most recent schedule and join your colleagues for lunch or a coffee break and introduce yourself.

# Schedule of Presentations

| Time           | Wednesday 9 December 2020 – <a href="#">Turner Auditorium</a>                                                                                                  |                                                |                                                |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|
| 9:00 to 9:15   | Genetic monitoring: defining functional connectivity for Yellowstone's amphibians – Melanie Murphy                                                             |                                                |                                                |
| 9:15 to 9:30   | Responses to Wetland Mitigation in the GYE: Tracking Responses of an Amphibian Community – Blake Hossack                                                       |                                                |                                                |
| 9:30 to 9:45   | Batrachochytrium salamandrivorans (Bsal) not detected in an intensive survey of North American amphibians: the view from northern California – Brian Halstead  |                                                |                                                |
| 9:45 to 10:00  | BRIEF UPDATE: Bd updates: what do we know about its presence in the West? – Brian Halstead                                                                     |                                                |                                                |
| 10:00 to 10:30 | Coffee Break                                                                                                                                                   | Murphy<br><a href="#">Spotted Frog Room</a>    | Halstead<br><a href="#">Chorus Frog Room</a>   |
|                |                                                                                                                                                                | Hossack<br><a href="#">Western Toad Room</a>   | <a href="#">Tiger Salamander Room</a>          |
| 11:00 to 11:15 | Long-term mark-recapture monitoring to understand drivers of population change: lessons from boreal toad and Columbia spotted frog studies – Rebecca McCaffery |                                                |                                                |
| 11:15 to 11:30 | Trade-offs in initial and long-term handling efficiency of PIT-tag and photographic identification methods – Erin Muths                                        |                                                |                                                |
| 11:30 to 11:45 | Time-to-detection occupancy modeling: An efficient method for analyzing amphibian occupancy – Brian Halstead                                                   |                                                |                                                |
| 11:45 to 12:00 | Exploring more flexible models in understanding amphibian breeding dynamics in the GYA – Bill Gould                                                            |                                                |                                                |
| 12:00 to 1:00  | Lunch Break                                                                                                                                                    | McCaffery<br><a href="#">Spotted Frog Room</a> | Halstead<br><a href="#">Chorus Frog Room</a>   |
|                |                                                                                                                                                                | Muths<br><a href="#">Western Toad Room</a>     | Gould<br><a href="#">Tiger Salamander Room</a> |

| Time         | Wednesday 9 December 2020 – <a href="#">Turner Auditorium</a>                                                                            |                                                     |                                                           |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------|
| 1:00 to 1:15 | What have we learned from 20 years of creating and restoring habitats for the Columbia spotted frog? – David Pilliod                     |                                                     |                                                           |
| 1:15 to 1:30 | Lessons learned from Boreal Toad Reintroductions in Colorado – Mary Kay Watry & Boyd Wright                                              |                                                     |                                                           |
| 1:30 to 1:45 | Integrating climate forecasts and amphibian data: a case study from the GYE – Mike Tercek & David Thoma                                  |                                                     |                                                           |
| 1:45 to 2:00 | Building comprehensive amphibian habitat models to better inform amphibian conservation across landscapes – Paul Bartelt & Robert Klaver |                                                     |                                                           |
| 2:00 to 2:30 | Break                                                                                                                                    | Pilliod<br><a href="#">Spotted Frog Room</a>        | Tercek & Thoma<br><a href="#">Chorus Frog Room</a>        |
|              |                                                                                                                                          | Watry & Wright<br><a href="#">Western Toad Room</a> | Bartelt & Klaver<br><a href="#">Tiger Salamander Room</a> |

This marks the end of the formal Amphibian Symposium. If interested, please consider participating in the Ecological Indicators Special Issue conversation at 3 pm.

|              |                                                                                                          |
|--------------|----------------------------------------------------------------------------------------------------------|
| 3:00 to 4:00 | <b>Discussion on the Ecological Indicators Special Issue – Meet in <a href="#">Turner Auditorium</a></b> |
|--------------|----------------------------------------------------------------------------------------------------------|



You are encouraged to take coffee breaks and lunch in the Lobbies or any Amphibian Rooms for unscheduled discussions.



# Protocol Review

*Thursday, Dec 10, 2020*

- **Overview of the NPS Inventory & Monitoring Division**
  - **Overview of GRYN's Amphibian Monitoring Program**
  - **Review of Objectives**
    - Catchment and Site-level Occupancy
    - Wetland dynamics
    - Western Toad trends
  - **Feedback from Park Partners**
- 
- **Successes, Challenges, and Information Delivery**
  - **Budget Overview and Sustainability**
  - **Collaboration Opportunities**
  - **Group Discussion**





## **Ecological Insights From 70 Years of Greater Yellowstone Amphibian Studies**

*December 10, 2020 – 3:00PM-4:30PM MSU*

Dr. Charles Peterson, Professor of Zoology, Idaho State University

Dr. Andrew Ray, Ecologist  
National Park Service



A photograph of three scouts in a grassy field. On the left, a male scout in a plaid shirt and tan cap is pointing at something on the ground. In the center, a female scout in a grey uniform and green cap is looking down. On the right, another female scout in a grey uniform and green cap is also looking down. They appear to be working together on a project. A semi-transparent white circle is overlaid on the left side of the image, containing the title and list.

# MEETING GROUND RULES

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- Be Respectful
- Step up, step back
- Participation by all
- Ask for clarification
- Thumbs up/side/down



## **Technology Reminders**

- **Check your hardware; microphone, camera, and screen before the meeting begins.**
- **Remain on mute when not speaking.**
- **Leave your video camera on if bandwidth allows (body language is communication!).**
- **Engage in the chat.**
- **Practice before presenting.**

# Helpful Links

- **GRYN Amphibians & Wetlands Page**
- <https://www.nps.gov/im/gryn/amphibians.htm>
- **USGS ARMI**
- <https://armi.usgs.gov/>
- **GRYN - Amphibians & Wetlands - 2020 Protocol Review Literature**
- <https://irma.nps.gov/DataStore/Collection/Profile/7869>

If you need help reaching any of these resources, please contact  
[jana\\_cram@nps.gov](mailto:jana_cram@nps.gov)



2019 Field Crews with Chuck Peterson  
at Fountain Flats Road



## Planning Team

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