



Midwest PARC Quarterly Newsletter - December 2021

Compiled by members of the **Outreach and Communications Team (OCT)**
(Interested in joining the OCT? Contact us PARCMidwest@gmail.com)

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2021 Year in Review!

MW PARC grew and accomplished a lot in 2021!

131 new
Twitter followers



100+
virtual meeting
attendees

1,097 UNIQUE WEBSITE VISITORS

10 travel grants to
students in seven states

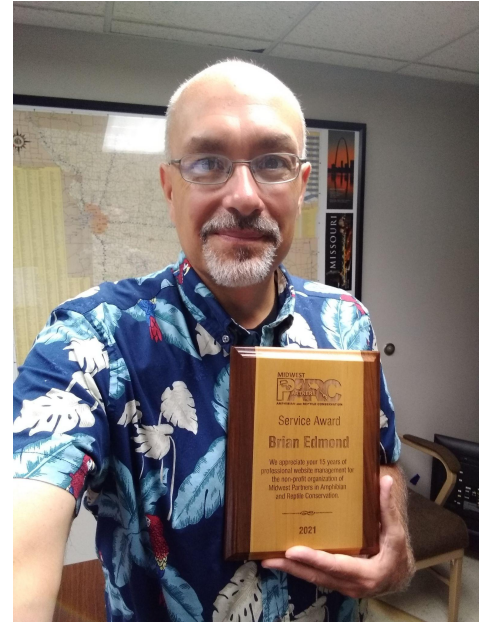


4 Brodman
Student
Awards

Image caption: Since the MW PARC website was created in March, we've had 1,097 unique visitors from all continental states! In 2021, we added 131 new Twitter followers, welcomed over 100 attendees at our first-ever virtual meeting, and awarded 10 travel grants and four Brodman Student Awards to students engaged in herpetology research. Image by Denise Blough.

More highlights from the last year:

- Transitioned to a **new website** (mwparc.org). A big **thanks to Brian Edmond** (image on the right) **for the past 15 years of website management!**
- Developed [task teams](#) and **quarterly newsletters**.
- Hosted our **first virtual meeting!** A total of 27 oral and poster abstracts were submitted. Thanks to everyone who made the meeting a success!
- Students from South Dakota, Ohio, Michigan, Illinois, Indiana, Minnesota, and Missouri received **travel grants**. These funds helped support research on diverse topics from disease ecology to invasive species impacts. You can read more about these projects via the [MW PARC website's Resources page](#).
- Four **Brodman Student Awards** were given out at the annual meeting. The students awarded, and abstracts of their research, are visible on the [MW PARC website's Meetings page](#).
- We **raised over \$700 via merchandise sales, auctions, and meeting registration donations**. These funds will go to support future grants and awards!
- We have **just over 800 followers on Twitter!**



Advisory Board Updates!

The Advisory Board provides advice, guidance, support, and advocacy for the MW PARC with the overall goal of furthering amphibian and reptile conservation throughout the Midwest. It is composed of two co-chairs and members representing the various partners of PARC, including state and federal agencies, academia, and others. Members typically serve for two-years and can serve multiple terms.

There was a lot of change in the Advisory Board in 2021. We said goodbye to six board members (listed below), and to Jennifer Buchanan as our senior co-chair. We thank each of these parting individuals for volunteering their time, creativity, and expertise to better MW PARC over the last several years.

Outgoing senior co-chair: Jennifer Buchanan (Missouri)

Outgoing board members:

Bob Brodman (Indiana), Paul Frese (Iowa), Katy Greenwald (Michigan), Greg Lipps (Ohio), Mark Mills (Missouri), and Julia Robson (Wisconsin)

We also want to extend a hearty welcome to incoming Advisory Board members (listed below), including **Travis Kurtz** as our new junior co-chair! **Melissa Youngquist** has stepped into the senior co-chair position. We are looking forward to working with you in 2022 and beyond!

Rising senior co-chair: Melissa Youngquist (Illinois)

Incoming junior co-chair: Travis Kurtz (Michigan)

Incoming board members:

Drew Davis (South Dakota), Dreux Watermolen (Wisconsin), Dexter Mardis (Kansas), Mike Lannoo (Indiana), and Brock Struecker (Indiana)

Get Involved - Join a Task Team!

Task Teams within MW PARC are a great way to meet other folks working in the region. They also allow members to directly shape the products and overall initiatives pursued by MW PARC. Consider joining a Task Team in 2022! Email PARCMidwest@gmail.com if interested.

Outreach and Communications Task Team. Lead: Jennifer Y. Lamb. Produce content for social media, the MW PARC website, and quarterly newsletters. Our purpose is to promote knowledge about the conservation of amphibians and reptiles, and facilitate connection and a sense of community among those interested in herpetology in the Midwest.

Crawfish Frog Task Team. Co-Leads: Nate Engbrecht & Melissa Youngquist. This team was created to serve as a collaborative platform for biologists, researchers, and individuals interested in crawfish frog research and conservation in the Midwest. An email listserv is being created for this new team to enhance communication and facilitate discussion between meetings. Plans are being made to develop a crawfish frog “best management practices” document for land managers.

Herp Highlight: Eastern Spadefoot

The Eastern Spadefoot (*Scaphiopus holbrookii*) has quite literally come into the spotlight. It was long considered a rare and elusive species that was only detectable during breeding and migration events. Recent spotlighting studies suggest the amphibians may emerge above ground quite regularly ([Devan-Song et al. 2021](#)). In Indiana, Eastern Spadefoots are now known to occupy at least 26 counties, up from seven counties just 20 years ago ([Engbrecht et al. 2020](#)).

Eastern Spadefoots are seen less frequently in the Midwest compared to the Southeast or along the Atlantic coast. This anuran with cat-like pupils is roughly 2-3 inches long. They are brown-tan or olive green with two yellow stripes forming an hourglass shape on the back. Eastern Spadefoots tend to occur in forested or open areas with loose, sandy soils where heavy rainfalls bring them to the surface to breed. Fun fact: When threatened, spadefoots (Family Scaphiopodidae) release an enzyme that smells like peanut butter! It can cause allergic reactions in some people!



Image description: An Eastern Spadefoot sits on leaf litter. Its bright yellow markings are visible along the sides of the body and back, and its pupils are diamond shaped. Photo by Paul Block ([DoD PARC Group and Photo Site](#)).

Hot Off the Presses! - Recent Publications

Books and Guides

The Amphibians and Reptiles of Missouri. 2021. J.T. Briggler and T.R. Johnson. Available for purchase from the [Missouri Department of Conservation Nature Shop](#).

Field Guide to Amphibians and Reptiles of South Dakota (Second Edition). 2021. A.M. Kiesow and D.R. Davis. Available via the [South Dakota Game, Fish, & Parks](#) website soon!

Scientific Journal Articles Featuring Herps in the Midwest

Snake Fungal Disease! Haynes and Allender provide an overview of Ophidiomycosis (“Snake Fungal Disease”), including a discussion on its history, current distribution, transmission, temporal and spatial variation, and how it affects the snakes. Includes a current North American distribution map of Ophidiomycosis. The disease has been found in most states in the Midwest, excluding North and South Dakota and Nebraska.

Haynes, E.K. and M.C. Allender. 2021. History, Epidemiology, and Pathogenesis of Ophidiomycosis: A Review. *Herpetological Review* 52:521–536.

Rare species report! Engbrecht et al. detail the results of 20 years of surveys for the Eastern Spadefoot Toad (*Scaphiopus holbrookii*) in Indiana. They highlight a number of new populations across the southern half of the state, bringing the number of known occupied counties from seven to 26. Their more recent data show a strong distributional pattern associated with windblown sand deposits along riparian corridors, and also in areas with karst topography.

Engbrecht, N.J., M.J. Lodato, and J.J. Mirtl. 2020. The Eastern Spadefoot, *Scaphiopus holbrookii*, in Indiana: Status, Biogeography, and Natural History. *Proceedings of the Indiana Academy of Science* 129:124–142.

Greensnakes in the Great Lakes! Blais et al. use mitochondrial sequences and single nucleotide polymorphisms (SNPs) to shed light on connectivity and historical movements of Smooth Green Snakes (*Opheodrys vernalis*). They found that populations in the Great Lakes region were a mix of two lineages that likely met during the northward expansion after the Pleistocene. Their data suggest that some populations are shrinking (e.g., central Great Plains region) while others are expanding (e.g., Prairie Pothole region).

Blais, B.R. et al. 2021. Phylogeography of the smooth greensnake, *Opheodrys vernalis* (Squamata: Colubridae): divergent lineages and variable demographics in a widely distributed yet enigmatic species. *Biological Journal of the Linnean Society* 134(4): 940 - 957.

Want to see your research highlighted? Have you recently published on populations of amphibians or reptiles in the Midwest? We want to hear about it! Email the paper or citation information to PARCMidwest@gmail.com.

Header photo description: Two Eastern Spadefoot Toads (*Scaphiopus holbrookii*) in amplexus in a flooded lawn. They are surrounded by aquatic vegetation. The smaller male is on top of the female with his forelimbs wrapped beneath her pelvic girdle (inguinal amplexus). Photo by Nathan Engbrecht.

Brian Edmond photo description: Portrait of Brian wearing glasses and a blue, plaid shirt and holding the award. This award thanks Brian for 15 years of website management for Midwest PARC. Photo by Brian Edmond.

Acknowledgements: Content for this newsletter created, compiled, and organized by OCTT members Denise Blough, Nathan Engbrecht, and Jennifer Lamb. This issue’s Herp Highlight was written by Denise Blough.