

# Lateral Lines

Welcome to spring, fellow fish heads!

I guess spring is more of a calendar event this year than a weather-motivated event - what a crazy couple of months weather-wise! It will be interesting to see how the crazy back-and-forth temperatures affect our fishy friends' spawning activities and recruitment as we move forward. This seems to be another cog in the wheel of what can be argued to be a pattern of more variable, if not extreme, weather patterns that have occurred over at least the last five years or so. I admit that I am unnerved by some of the national environmental policy changes that appear to be imminent as I write this address, and I fear what those may mean for the persistence and integrity of natural resources on scales ranging from local to global. I have also witnessed multiple funding reductions and losses that will no doubt make our tasks of managing natural resources much more challenging in the near future. To top this all off, we are in the midst of a highly charged political and personal atmosphere with considerable polarization that threatens to stymie progress (no matter how you personally define progress). I think it is safe to say that the atmosphere is daunting for many of us regardless of our individual beliefs. Despite this, I urge us all to be united in our continued dedication and efforts to protect the natural resources that are so critical to the health and quality of life for humanity regardless of individuals' beliefs, party affiliations, etc. Listen to one another and be open to other views and opinions, even if you don't agree. Working together and communicating is essential. 'Nuff said!

If you were not able to attend the Indiana-Ohio joint spring meeting, let me assure you that you missed an excellent event! Hats off to Drew Holloway, Bri(anna) Ciara, Ben Miller, Mark Pyron, and Tom Bacula for their excellent work in partnership with folks from the Ohio Chapter in putting the meeting together. I offer special thanks to both Drew and Bri given the administrative tasks and money handling they had to do on our behalf! Both the plenary and contributed presentations were timely and informative, and there was plenty of time for both business and camaraderie. I personally think that such combined meetings are very constructive and promote "bigger" thinking, and I would love to see such combined efforts become more of the norm than an occasional venture. In short, I think that we have a lot to share with and learn from our neighbors that can be enhanced by joint spring meetings.

Very best!

Reuben



## **Secretary/Treasurer Report— Bri Ciara**

IAFS Spring Business Meeting Minutes  
Alumni Center Ball State University  
Muncie, IN  
February 15, 2017

### **Call To Order**

The meeting was called to order at 3:18pm by Ruben Goforth.

### **Establish Quorum**

The secretary confirmed that there was a quorum to conduct business. There were 19 members in attendance.

### **Agenda Editions/Deletions**

None. Fall meeting minutes were approved.

### **New Members/Guests**

Chris Schwinghammer, an Assistant Fisheries Biologist for District 6 of the Indiana Department of Natural Resources, introduced himself.

Adam Wishon, a student at Indiana University, introduced himself as the first representative of IU's newly established student chapter.

Matthew Campbell, Cole Jones, Jason Jaworski, Sam Armstrong, and Mackensie Carter, all Purdue University students, introduced themselves.

### **Secretary's Report.**

The Fall 2016 Business Meeting Minutes were posted on the IAFS website. No comments were received on the website or during the Spring Meeting. Forty members were reported from the Parent Society

### **Treasurer's Report**

The treasurer's report was passed out and Bri Ciara briefly explained the report. See Attachment 1 for the report. A summary of income and disbursements since the Fall Meeting were summarized along with account balance totals. The funds from the raffle checking account were transferred into the main checking account and raffle account was closed. The cost of the Spring Meeting was also discussed. EXCOM explained that a majority of the monetary loss was a tradeoff to allow greater student attendance which was seen as an overall benefit to the meeting success. The status of the seed money for the next MW Fish and Wildlife Conference to be held in Indiana was discussed. Bri clarified that the application to the Parent Society was submitted but the check had not yet sent in. She said she will be writing and submitting it. Poor communication between North Central Division (NCD) and Parent Chapter was brought up. Sandy will be looking into this. There was a motion to accept the report, seconded, and approved as written.

### **Committee Reports**

#### **Standing Committees**

##### **Awards**

Indiana won the Best Small Chapter and Best Communication awards from the NCD; both were accepted at the Midwest Conference by Drew Holloway.

Ball State University student sub-unit won the Best Student Chapter award from NCD which 10 BSU students accepted at the Midwest Conference.

### **Programs**

Ruben recognized meeting organizers. Ben Miller reviewed basic run-down of what to expect for Fall 2017 Meeting. Location will depend on workshop activity. Sandy suggested that Missouri Department of Natural Resources hold a training opportunity on trawling at Monroe Reservoir. A few other ideas were brought up. All ideas should be sent to Ben Miller and he will then send out the top 3 continuing education suggestions for a final vote from the Chapter.

## **Secretary/Treasurer Report— Bri Ciara**

### **Membership**

Bri Ciara stated the Parent Chapter sent out a membership list that listed 40 members, both student and professional. Combined with the meeting registration and recently paid dues, State membership was estimated to be about 50+ members.

### **Nominations**

Daniel Arndt, Kevin Gaston, and Rob Ackerson were all nominated as candidates for Vice President. Bri Ciara was nominated for Secretary-Treasurer. All 3 Vice President candidates gave short biographies of themselves. Daniel Arndt was voted in and accepted the Vice President nomination. Bri Ciara accepted the Secretary-Treasurer position.

### **Resolutions**

None.

### **Communications**

Drew Holloway gave an update on the IAFS Facebook page – it is doing great. He reminded people to remain active and post field sampling photos. Sandy reminded members that newsletter will come out in April and urged people to submit material. She also praised our strong Facebook presence. Twitter was identified as not very work-friendly.

### **Ad hoc Committees**

#### **Continuing Education**

Larry Koza reported that Brant Fisher presented a Minnow ID Workshop at the Fall Business meeting that was very well received with at least 25 attendees. The field portion of the workshop was also well received by those who participated. Brant posted the PowerPoint presentation from the workshop on the Division of Fish and Wildlife website. Ideas were discussed for the Fall 2017 Business Meeting and Continuing Ed. Workshop. A few ideas included a tour of a shrimp aquaculture facility, a population modeling workshop presented by Mike Alan from the University of Florida (might be 1.5 day meeting), and an outboard motor and field equipment repair workshop. All suggestions for workshops should be sent to Ben Miller who will then send out a Chapter-wide survey.

### **Certification**

Jason Doll will be stepping down from this position and requested all interested members should contact EXCOM about stepping up to this role. Poor communication with National AFS on what courses count towards certification was discussed.

### **Legislative Communications**

It was discussed that INCA has been active recently. There appears to be a push in legislation for a sustainable funding source for fish and wildlife management.

### **History and Archives**

Daniel Arndt provided Mark some materials to put on the website.

### **Outreach**

#### **Fish with a Fish Head Day**

Clint Kowalik reported that the “Fish with a Fish Head Day” at the Indiana State Fair was a success helping 140 kids to catch a fish, despite an Indiana tsunami. There were 16 Indiana AFS members who volunteered on Fish with a Fish Head Day and several who helped the fishing pond throughout the duration of the State Fair. This year, the Fish with a Fish head Day will be August 19<sup>th</sup>, 2017 from 4:30-8:30 pm. Contact Clint Kowalik for more details.

### **Master Naturalists**

Indiana Master Naturalists classes were conducted by Chapter members, specifically at Eagle Creek, that promoted the Chapter talking about fish and macroinvertebrates.

### **College Anglers**

A pilot study, conducted at Ball State University to get college students fishing, had 11 student participants. April 15th 2017 is a free fishing day where Clint will be partnering with Ball State University again to get college students fishing. Clint reminded members to promote AFS at outreach events.

## **Secretary/Treasurer Report— Bri Ciara**

### **Recreational Boating and Fishing Campaign**

The Recreational Boating and Fishing Campaign has presented a goal to get 14,000,000 more anglers in the U.S. participating in fishing over the next 5 yrs. Indiana's goal is to add 24,000 additional anglers each year to help achieve the national goal of 14 million. These anglers will hopefully come from re-energized recruitment, retention, and reactivation activities.

### **Props**

The nice skyline poster presenting information on American Fisheries Society was loaned to the Indiana Chapter from NCD and is available to be borrowed for other outreach events, including student events.

### **Technical Committees**

#### **Rivers and Streams**

Steve Jacquemin is now living in and part of Ohio happenings and should no longer be responsible for Indiana River and Streams Committee. This position is open, all interested people are welcome to step up to this role, contact EXCOM if interested.

#### **Centrarchid**

The Centrarchid committee met in Nebraska February 5-8th. All those with any information, research, or updates should send them to Kevin Gaston.

#### **Esocid**

The Esocid committee met in meeting at the Midwest Conference in Nebraska February 5-8th. Anyone with information, research, or updates should send them to Nick Haurert.

#### **Walleye**

Jason Doll was not able to attend the meeting. He will be stepping down and is looking for a replacement on this committee. The Walleye Committee will now also include Yellow Perch.

#### **Ictalurid**

Craig Jansen was not able to attend the meeting in Nebraska. Anyone with information, research, or updates should send them to Craig Jansen.

#### **Reservoirs**

The Reservoir Committee met the Midwest Conference Reservoir Symposium. Anyone with information, research, or updates should send them to Sandy Clark-Kolaks.

### **Student Subunit Reports**

#### **Ball State**

Crystal Nichols, from Ball State's student sub-unit, reported 19 members and participation in several events including: a presentation about the Muncie Bureau of Water Quality by John Craddock, trip to the Tennessee Aquarium, seining sampling event in Georgia, independent presentations by Ashley and Justin Walters and Tomas Höök, QHEI workshop on Ball State's campus, and a CV Workshop. Ball State was represented at the Midwest Fish and Wildlife Conference by 10 students, 4 poster and 2 podium presentations. Coming up, BSU plans to attend a tour at Cikana fish hatchery, partner with the BSU Wildlife Society to volunteer at Red Wolf Sanctuary, volunteer for Walleye spawning at Brookeville Reservoir with IDNR, White River Clean-Up, coordinate a group camping trip, and continue moving plans forward for a collaborative project with a nearby Honda plant.

#### **Purdue**

Matt Campbell reported that the sub-unit has a few new freshman members. The sub-unit coordinated an electrofishing demonstration and hosted Drew Holloway for a panel discussion with fisheries professionals. They are hosting a fundraising event called the Sturgeon Spawning Run 5k on April 22, 2017 in partnership with the Tippecanoe Partnership for Water Quality at Tapawingo Park, West Lafayette. They also look forward to more field workshops and invited guest speakers throughout the Spring semester.

## **Secretary/Treasurer Report— Bri Ciara**

### **Manchester**

None.

### **Indiana University**

Adam Wishon, from IU's newly established student Sub-unit, reported 2-4 members actively meet and plan to participate in a State hatchery tour, sampling event with Dave Kittaka of INDR, and look forward to hearing from a few guest speakers.

### **Unfinished Business**

Ruben Goforth reported that, through communication with Tom Bacula, the procedures manual was almost finished being reviewed for editing.

Jason Doll reminded attendees of the R workshop the last day of the Spring Meeting.

Ben Miller reminded attendees for the Student-Professional Networking Activity following the business meeting.

Ohio will be planning and hosting the next Midwest Fish and Wildlife Conference.

### **New Business**

Membership List

Ben Miller wants to create a list of all current members with short biographies to help facilitate communication between students and professionals.

### **Hoosier National Forest Fish Passage Workshop**

Len Kring described and will send out info pertaining to the upcoming Hoosier National Forest Fish Passage Workshop June 19-21, 2017.

### **NCD President**

Sandy Clark-Kolaks, the NCD President, reminded members to keep checking the AFS job board for new positions. Contact her to post a position [sclark-kolaks@dnr.in.gov](mailto:sclark-kolaks@dnr.in.gov).

The website also has an updated link for continuing education opportunities.

Sandy also reminded members to post and be active on the NCD Facebook page.

### **Adjourn**

No more new business and a motion to adjourn was made and seconded at 4:22 pm.

## Secretary/Treasurer Report— Bri Ciara

**Indiana Chapter of the American Fisheries Society  
Financial Report  
For the Period 9/23/2016-2/14/2017**

<b>INCOME</b>		<b>DISBURSEMENTS</b>	
<b>Dues, registration fees, grants, and miscellaneous</b>		<b>Operating expenses, contributions, gifts, donations, and miscellaneous</b>	
Registration, Dues, and Sponsors	\$5,430.00	Speaker rooms and meals for Spring TBD	
*Final meeting income TBD			
Transfer from Checking 3345 to 1084	\$3,972.29	Fall meeting meals	\$117.51
		Coolwater Cultuer Workshop	
		Sponsorship	\$500.00
		Website Domain registration - Hostgator.com	\$218.40
		Reimbursement for Mdiwest Conference Attendance	\$939.01
<b>Sub Total</b>	<b>\$9,402.29</b>	<b>Sub Total</b>	<b>\$1,774.92</b>
<b>Total Income</b>		<b>Total Disbursements</b>	
	<b>\$9,402.29</b>		<b>\$1,774.92</b>
<b>Assets as of: 9/23/2016</b>		<b>Assets as of: 2/14/2017</b>	
Checking 1084	\$13,050.00	Checking 1084	\$20,677.54
Checking 3345	\$3,972.00	Checking 3345 - Closed	\$0.00
Paypal	\$1,650.98	Paypal	\$4,729.89
<b>Total</b>	<b>\$18,672.98</b>		<b>\$25,407.43</b>
<b>Prepared By</b>			
<b>Brianna Ciara</b>			
<b>IAFS Treasurer</b>			

## Chapter News

### **Current Officers**

**President:**

**Reuben Goforth**

**President Elect:**

**Ben Miller**

**Vice President:**

**Drew Holloway**

**Past President**

**Tom Bacula**

**Secretary/**

**Treasurer:**

**Bri Ciara**

**Newsletter Editor:**

**Sandy Clark-  
Kolaks**

**Visit us on the web**

**at:**

**[www.indianaafs.org](http://www.indianaafs.org)**

**Or on**

**Facebook**

### **Awards Chair— Rob Ackerson**

Hearty thanks go out to all who presented talks and posters at our recent meeting. I am sure that all those who attended our meeting feel as I do, that all of the contributions are appreciated.

I would like to point out that **all** Presentations and Posters were very close. If any of the presenters/poster participants would like to know any of the remarks/comments (if any) they can contact me (for future improvements).

#### **Awards will be presented at the Fall AFS meeting**

Best Professional Paper:

**Drew Holloway**—*Using Long-term Biological Monitoring Data (1983-2016) to Address Changes in the Fish Community of West Fork White River Muncie, IN*

Best Student Paper:

**R. Dillon et al., OSU**—*Determining Potential Bias by Chaoborus During Hydroacoustic Surveys of Prey-Fish Biomass in Ohio Reservoirs*

Best Student Poster:

**Caleb Artz**—*Establishing Long-Term Flashiness Index Values for West Fork White River: Analyzing Trends Through Graphical Analyses*

#### **A big thank you goes to all our judges:**

Andy Bueltmann	Drew Holloway	Kevin Gaston	Ben Miller
Rod Edgell	Clint Kowalik	Nate Thomas	Craig Jansen
Matt Burlingame	Sandy Clark-Kolaks	Dave Kittaka	Reuben Goforth
Jeremy Price	Dave Meuninck	Rob Ackerson	

\*The Best Student paper and poster were awarded at the conference and will receive a certificate at the fall meeting. Best Professional paper will be the same as in the past.

\*\* I would also like to note that I would like to see more students/professionals get involved in the judging. This can be a great way to be involved in the chapter and also provide some learning experience.

Rob Ackerson  
IAFS Awards Chair  
Phone: (219)369-9591  
[rackerson@dnr.in.gov](mailto:rackerson@dnr.in.gov)

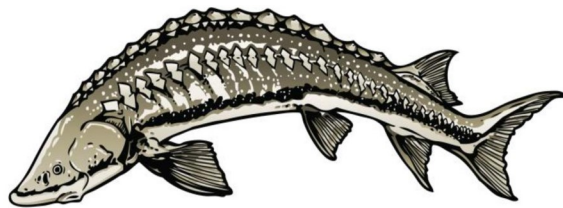
# Chapter News

## Indiana SubUnits



### Purdue University— Matthew Campbell

The Purdue AFS has had a solid start to our spring semester. We were able to attend the IN-OH AFS meeting and really had a fun and beneficial time. Thanks to all that put on such a great conference! For the upcoming meetings we really plan to get out in the field and gain some hands on experience. Our biggest upcoming event will be our Sturgeon Run 5k run/walk.



## 4/22/2017 PURDUE AFS STURGEON RUN 5K

On April 22<sup>nd</sup> (Earth Day) the Purdue Chapter of the American Fisheries Society will be having our annual Sturgeon Run 5k run/walk marathon with registration at 9am and the race starting at 10am. This year we will be teaming up with the Tippecanoe Partnership for Water Quality, and they will be providing raffles and information on how to improve our water quality.



**Tapawingo Park**

Tapawingo Dr.

West Lafayette, IN 47906

Early Registration until  
April 1st

Free T-Shirt for those who  
register by April 1<sup>st</sup>!

Register at  
[sturgeon5k@yahoo.com](mailto:sturgeon5k@yahoo.com)

Registration fee: \$20

Please include T-shirt size  
in email

**UPCOMING MEETINGS:**  
March 23<sup>rd</sup>

Pfendler G077 @ 6pm

Free pizza and soft drinks!



## In the News



- Recreational fishing economic impacts by congressional districts  
<https://fisheries.org/2017/03/new-infographics-on-recreational-fishing-economic-impacts-by-congressional-district/>
- Hooked on habitat: recreational fishers' perceptions of habitat restoration  
<http://habitat.fisheries.org/hooked-on-habitat-recreational-fishers-perceptions-of-habitat-restoration/>
- Changing climate threatens Walleye, benefits Largemouth Bass  
<http://habitat.fisheries.org/changing-climate-threatens-walleye-benefits-largemouth-bass/>



## North Central Division of the American Fisheries Society

- Looking to hire a new employee? Looking for a job in the Midwest? Check Out the NCD Job Board. It's free to post to.  
<http://ncd.fisheries.org/ncd-jobs-board/>
- Be sure to check out North Central Division AFS President's latest blog post!  
<http://ncd.fisheries.org/presidents-blog/>
- Looking for learning opportunities? Check out the Continuing Education section.  
<http://ncd.fisheries.org/continuing-education/>

## Upcoming Events

60th Annual Conference on Great Lakes Research  
May 15-19, 2017  
Detroit, MI  
<http://iaglr.org/iaglr2017/>

AFS NCD Centrarchid, Esocid, Walleye Summer Joint Meeting  
July 18-20, 2017  
Isle, MN  
<http://ncd.fisheries.org/walleye/>



AMERICAN FISHERIES SOCIETY  
147TH ANNUAL MEETING  
**TAMPA, FLORIDA**  
AUGUST 20-24, 2017

78th Midwest Fish and Wildlife Conference  
January 28-31, 2018  
Milwaukee, Wisconsin  
<http://www.midwestfw.org/index.html>



Indiana Chapter of the American Fisheries Society (IAFS)  
North Central Division of the American Fisheries Society

Don't forget to post your field sampling pictures to show the rest of the IAFS members what types of projects you are working on!



## *Training Workshop*

### **The Stream Simulation Design Approach for Providing Aquatic Organism Passage at Road-Stream Crossings**

#### **Dates**

16 - 20 October 2017 or 23 - 27 October 2017 (4.5 days)

#### **Location**

Bedford, Indiana

#### **Tuition**

None, participants pay travel and per diem

#### **Workshop Sponsors**

USDA Forest Service: National AOP Design Cadre, Eastern Regional Office

#### **Target Audience**

Civil Engineers, Geotechnical Engineers, Hydrologists, Geomorphologists, Ecologists, Biologists, Geologists

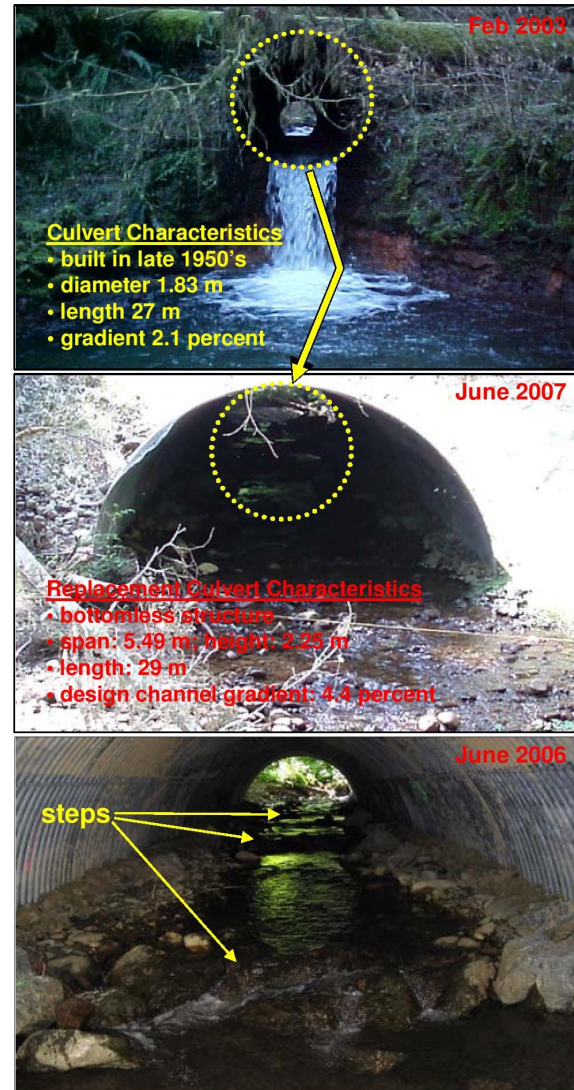
#### **Contact for Additional Information**

Len Kring, lenmkring@fs.fed.us; Amanda Kunzmann, akunzmann@fs.fed.us

#### **Workshop Description**

This 4.5 day workshop will present the USDA Forest Service's stream simulation method, an ecosystem-based approach for designing and constructing a channel through the road-stream crossing structure that reestablishes physical and ecological continuity along the stream corridor. The premise of stream simulation is that if the design channel simulates the dimensions and characteristics of the adjacent natural channel, fish and other aquatic organisms should experience no greater difficulty moving through the structure than if there were no crossing. Water depths, flow velocities, and flow paths in the channel through the road-stream crossing are designed to be as complex and diverse as those encountered in the adjacent natural channel. Stream simulation integrates fluvial geomorphology with engineering principles to design a road-stream crossing that contains a natural and dynamic channel through the structure. This approach requires measurements of site specific channel characteristics in the adjacent natural channel to ensure that an appropriate reference reach can be identified. Identifying a reference reach is a key concept and component of stream simulation as it provides the natural template for designing a channel through the crossing and determining the size and embedment depth of the replacement structure.

This workshop will teach participants the necessary skills to design road-stream crossing structures that provide unimpeded fish and other aquatic organism passage through the structure, restore natural channel characteristics and fluvial processes through the structure, and maximize the long-term stability of the structure. Participants will systematically go through the stream simulation methodology of collecting and interpreting channel data at road-stream crossing sites, applying and integrating these data to develop engineering-based stream simulation design channels and road-stream crossing structures, and effectively constructing stream simulation designs by using numerous examples and class-based exercises. Participants work in interdisciplinary teams throughout the workshop to resolve road-stream crossing scenarios at different stages of the stream simulation site assessment, design, and construction process. An all-day field trip on a nearby national forest will occur mid-week. The field trip to multiple road-stream crossing sites will complement and reinforce concepts presented in the classroom as participants will identify, assess, and discuss various ecological, geomorphic/hydrologic, and engineering issues at those sites.



## Continuing Education Update - Steve Andrews

The most recent continuing education event was Identification of Indiana Minnows taught by Brant Fisher at the 2016 fall meeting. The workshop was a great success with at least 23 attendees and an optional field sampling trip.

Four possible topics are being considered for 2017. They include Trawling for Fish Sampling, Outboard Motor and Boat Trailer Repair, Fish Population Modeling, and Touring an Indiana Shrimp Farm. The Fish Population Modeling course could require a full day and a more significant financial commitment from the chapter.

The EXCOM will be sending out an informal survey to obtain additional member input on these topics in the near future.



## Esocid Update - Nick Haurert

**James Skipper**  
**Hatchery Biologist**  
**East Fork State Fish Hatchery IDNR**

The state of Indiana has switched weening feeds in 2016. We've have made the switch from the Bio Oregon to the Otohime diet. Many other states have used this diet with positive results. Last year we did a small trial with the Otohime diet, and saw improved growth and survivals in the swim up to first 50 days period. Hopefully this switch results in better quality fish for stocking public waters. Additionally, Indiana stocked a total of 53,414 Muskies in public waters that averaged 10 inches in length during 2016.

**Larry Koza**  
**Assistant Fisheries Biologist**  
**Fish Management District 2 IDNR**

In 2016, District 2 participated in a Northern Pike Status and Trends netting project. We used small Lake Michigan style trap nets at two lakes. Eight trap net lifts were performed at Jimmerson Lake (Steuben County) from March 14 to 18. A total of seven Northern Pike was collected that ranged in length from 13.1 to 31.1 inches. In Crooked Lake (Steuben County), a total of seven trap net lifts were performed from March 21 to 24. A total of 11 Northern Pike was collected and they ranged in length from 21.9 to 37.3 inches.

## Esocid Update cont.- Nick Haurert

**Jed Pearson**  
**Fisheries Biologist**  
**Fish Management District 3 IDNR**

James Lake is being considered as potential broodfish site for Muskie in Indiana. Ten muskies were captured. All but two were caught in the Lake Michigan trap nets, including seven the first day. The others were caught near the inlet from Webster and near the outlet to Tippecanoe. Four were males measuring 37-39.5 inches. Of the six females, four were 36.5-45.5 inches and “ripe” (eggs flowing) and two (40-46 inch) were “green”. The ripe females were used to supplement the egg-take at Webster. Nine northern pike, 21.5-29.5 inches long, were also captured. Water temperature at the time was 42-44F.

A Muskie abundance estimation was conducted at Lake Webster. Only 42 muskies were trapped: 20 females, 19 males, and three immature fish. The catch rate (0.8/trap-day) was the lowest on record. Only 11 “ripe” females were captured. Meanwhile, female lengths continued to increase with few less than 36 inches. Four of 15 previously tagged fish had been originally caught in 2005, including a 39.5-inch male that grew only 4.5 inches and a 47.5-inch female that grew 1.5 inches. The adult muskie population may now be at its lowest level since consistent stockings at 5/acre began in 1997. Seven of 91 adults marked in 2015 (RPclip) were recaptured in 2016 for an estimate of only 195 ( $N=39*91/7$ ). For the first time, egg collection fell short of the goal and was supplemented by fish captured in nearby James Lake. However, anglers anecdotally reported catching more small muskies in 2016, so recent steps to improve stocking size and limit weed control may be contributing to a recovery. The switch to stocking age-1 yearlings could also speed recovery.

Northern pike catches were analyzed at Wawasee and Syracuse Lakes. The overall catch was 58 pike (1.8/lift), including 30 (1.9/lift) in Syracuse and 28 (1.8/lift) in Wawasee. Forty were males, 17 were females, and one was an immature fish. Eleven females were captured in Syracuse, three of which were ripe with eggs. Males were 14.0-28.8 inches long and averaged 22.0 inches. Females were 23.0-34.0 inches (28.6 mean). Ten females were  $\geq 28$  inches but only one was  $\geq 34$  inches. Most females were age-5 (27.0 inches) and age-6 (29.8 inches). Pike catch rates at Wawasee and Syracuse lakes were below the 25th percentile compared to other area lakes (2.8/lift). Catch rates by gender were also low. Because the catch rate the second week (2.0/lift) was greater than the first week (1.6/lift) and ripe females were caught the second week, sampling could have been delayed a week. Even so, only six more pike were captured the second week. In addition to lower catch rates, mean lengths of age-5 and age-6 females were also below the 25th percentiles, perhaps due to competition. Soft-rayed forage species are general scarce (Fink 2005). As a result, percentages of females  $\geq 28$  inches (59%) and  $\geq 34$  inches (6%) were somewhat less than other lakes (65% and 16%, respectively).

## **Esocid Update cont.- Nick Haurert**

**Nicholas Haurert**  
**Assistant Fisheries Biologist**  
**Fish Management District 4 IDNR**

Muskie surveys were conducted at Plover (67 acres) and Sandpiper (17 acres) pits in Driftwood State Fishing Area from March 14-18, 2016. Muskie have been annually stocked at 5 fish per acre in both pits since 1997. The water level during sampling was high enough that at least 3 feet of water connected the two pits at a low spot in the levee. This connection allowed boating and fish passage between both pits. Lake Michigan style trap nets were used in both Plover and Sandpiper pits during sampling. Length, weight, and left pectoral spine for aging was taken on each Muskie. A total of 10 Muskies was collected from 9 trap net lifts. The Muskie ranged in length from 36.5 to 47.6 inches and ages were 4 to 9 years old. Six of the 10 Muskies captured were greater than 40 inches. Two Muskies were recaptured during the survey.

**David Kittaka**  
**Fisheries Biologist**  
**Fish Management District 5 IDNR**

Muskie surveys were conducted in 2016 at Bass Lake and Duck Lake, two reclaimed coal strip pits in the Greene-Sullivan State Forest in Sullivan County Indiana. Southern Indiana reclaimed and abandoned coal strip mine lakes are some of the larger complexes of water that the IDFW manages for hunting and fishing. Often connected to a river system these pits have an abundant and diverse forage base. Stocking programs for these lakes began as early as 1997 and as recent as 2008. The Duck Lake muskie program began in 2008. This 59 acre pit is the outfall for the 220 acre Bass Lake, which has been stocked with muskie since 1997. Using Michigan style trap nets, effort consisted of 8 lifts per lake. At Duck Lake, a 32.3 inch and a 36.0 inch muskie were collected. Reports of anglers catching and seeing muskie are increasing at Duck Lake. The same effort and gear were used at Bass Lake. A total of 29 muskie was collected for a total weight of 362.25 lbs. The length range was 33.0 to 45.5 inches. Twenty-four of the muskie were at or greater than the 36 inch size limit. Thirteen were 38 inches and greater and of those 6 were 40 inches and greater.

**Rebecca Munter**  
**Fisheries Biologist**  
**Fish Management District 6 IDNR**

In 2017, we will be surveying our two Muskie pits down at Bluegrass FWA in March. We hope to catch more than 7 this year. Recently, two anglers posted decent Muskie photos on the 'Friends of Bluegrass' Facebook page. If we can catch fish, we will collect more information on the fish in the pits. We will try to get some good photos and advertise this unique opportunity near Evansville as much as we can.

## All in a Days Work

### Indiana DNR District 5 - Dave Kittaka/Deb King

D5 attended a great spring meeting at Ball State. Thanks to BSU and Ohio AFS for putting on a great program.

After 11 years, D5 brought Rainbow Trout back to Spring Mill Lake in Lawrence County. The 21-acre Spring Mill Lake is unique in that it is fed by two caves, maintaining a cool water supply to the lake throughout the year. The original trout stocking was discontinued in 2006 because of the shallow conditions at the lake. In 2015 and 16, Spring Mill State Park completed a hydraulic dredging project at 21 acre Spring Mill Lake. Even after the dredging, the lake is still relatively shallow, but the cool waters will sustain the fish well into the summer. Rainbow Trout being held at East Fork State Fish Hatchery were fat and ready to go, and because of crowding, the spring stocking occurred almost a month early. These fish averaged over 11 inches and anglers were happy to show me a few that were 14 inches. We began a volunteer card creel survey at Spring Mill to monitor

the fish harvest and interest in trout fishing. We are also trying to capture hourly angler counts on trail cameras at the lake. The cameras have a time-lapse setting, collecting snap shots of the lake every hour. We are still working out the bugs on placement and coverage of the cameras. After 15 days, based on cards returned, there have been an average of 1.57 anglers a day, and they harvested an average of 2 fish per day. It seems like low effort but the park staff has not seen the lake fished this hard in decades. Angler numbers should increase after the 2016 licenses expire in March.

We are also planning on Creeling our Muskie lakes at the Dugger Unit of the Greene-Sullivan State Forest. We have hired a creel clerk that will start the beginning of April. We will be conducting a bass population estimate at Montgomery City Lake in Daviess Co. This is a slot-size limit lake. Last estimate was around 90 stock-size and greater bass per acre. There were no Bluegill under 5 inches found.

We are also planning on 4 Status and Trends surveys along with general surveys at our Muskie lakes, Bass and Duck Lakes.



## Indiana DNR Southern Fisheries Research - Andy Bueltmann

Since December, Southern Fisheries Research has been focused on habitat enhancement and monitoring a Crappie minimum length limit regulation. Habitat enhancement has been ongoing at Harden Lake (aka Raccoon Lake) thanks to the help of Army Corps of Engineers (ACOE) staff and the DNR Public Access crew. We had rock delivered to Harden at the beginning of this year with the intention on placing rock piles while Harden was drawn down to winter pool. With the wet winter we had this year we became a little worried we would not have dry enough ground to support the bobcats used for placing rock piles. Well we finally got a week long window where the rain held off just long enough where the ACOE and our Public Access crew could get bobcats on the dry lake bed to place rock piles. We ended up placing rock piles in three of our seven planned sites and we plan on finishing the other four next year (2018) when the lake is at winter pool.



This spring/summer we plan on continuing placing various habitat structures in Harden from our appropriately named pontoon boat, the “Funtoon”. We will also be having multiple volunteer days this year to assist building habitat structures for anyone who is interested in helping out. Along with Harden habitat enhancement, Sandy has been working with bringing other fishing groups to the table to assist in our habitat enhancement program statewide. She had just recently met with Indiana Bass Federation and they showed interest and eagerness to assist in habitat enhancement wherever they can. While working on habitat enhancement we also finished up our spring sampling of Crappie at Dogwood Lake.



Crappie sampling consisted of using two Lake Michigan style trap nets and letting them set overnight for a total of 5 nights. We ended up collecting 203 Crappie which ranged from 7.0 in to 12.4 in. This year should be a good year for Crappie at Dogwood because we have a large year class from 2014 which are now legal size (over 9 in.). The other lake which we put a 9 in. minimum length limit on was Hardy Lake which we plan on sampling this fall. We plan on continuing our sampling efforts for another 2 years and end with a creel survey to monitor any effects from the implementation of the length limit. We had the pleasure of Adam Wishon, from IU, of helping us run our nets. Many of you met Adam at the Spring AFS meeting.



## Indiana DNR District 6 - Rebecca Pawlak

Sampling is ramping up in District 6 Fisheries. Becca and Chris Schwinghamer have been out sampling in the lovely Indiana spring weather which has ranged anywhere from beautiful and 65, to pouring rain, 33 mph winds, snow, and cold for the last 3 weeks targeting muskie and crappie on our two lakes where we stock muskie on the Bluegrass FWA. So far, 9 of the elusive muskies have been sampled and some impressive 10-13" crappie have been caught. The rest of our time is being spent prepping for bass sampling which will be starting in April. Bass surveys planned for April 2017 include Ferdinand State Forest Lake and Patoka Reservoir.



While out sampling for muskie and crappie, District 6 biologists caught several nice Largemouth Bass at Bluegrass Pit. It is unusual to catch bass during March in the Michigan style trap nets, but there were several bass in our nets. Eight were 18 inches or more. Our most impressive bass was 21.3 inches. This is one of six lakes in Indiana with an 18-inch size limit on bass.





## Indiana DNR District 1 – Tom Bacula/Bri Ciara

It has been great to have Bri come over to the district she brings a different and fresh perspective on many issues. Having an existing biologist move over has save considerably on the growing pains of learning DNR, DFW, and ways the State conducts business. This has allowed us to focus on getting caught up on reports and some other projects. Bri brought a lot of “hallway discussion” knowledge about the Research and fish management program from the Columbia City office that helped clear up speculation and questions. I am continually thankful for the report edits, clarification, and consistency that Bri and Jamie had provided to enhance the finished draft. Bri has rocked through some of the angler friendly reports in a very timely manner as she was one of the authors drafting the template. Bri is keeping with the assistant biologist tradition that Jamie started by expanding my music repertoire and tastes while they work then quizzing me on the artists, at least they aren’t whistling while they work.

The district field season started out the first week of March with Northern Pike netting at two connected lakes. This allowed us to collaborate with the new North Region Biologist, Matthew Linn, on the use of these large nets prior and instruct him the correct way before his projects. We caught 29 pike up to 38 inches and some nice Dogfish, Redear Sunfish, and Bluegills. Additional highlights to the district survey schedule include a Bruce Lake Largemouth Bass Survey (I am hopeful to shock a big Muskie), Shafer Lake survey, to-be-opened lake in Lafayette, Tippecanoe River general survey, and a few other lakes that it’s been a few years since being on. The “Lake to-be-Opened” in Lafayette (we are unclear of the name), was purchased partially with Bicentennial Funds. This initial survey on the gravel pit is in conjunction with IDEM for contaminant sampling and DFW central office staff. It is shaping up to be excellent collaboration to bring this resource to the public.

One big project for IAFS that we collaborated on with many others was the planning of the spring meeting in Muncie. Bri did a great job maintaining the ledger with changes in costs and attendees. Having the conference calls with other IAFS and Ohio AFS members really demonstrated the commitment to an excellent event that I was sad to have missed. I was glad to hear the meeting was well received.

Enjoy and have a safe field season.



Tom shows off 1<sup>st</sup> big pike (33in) collected from Lawrence Lake (March 2017).



Bri is all smiles with a 9lb grinnel collected from Lawrence Lake (March 2017).



Matthew Linn is serious with the first slimmer collected as North Region Research Biologist at Myers Lake (March 2017).

## Catch of the Day



The charm of fishing is that it is the pursuit of what is elusive but attainable, a perpetual series of occasions for hope.



John Buchan



Dave Kittaka's Brown Trout caught on the fly in South-west Wisconsin.



Andy Bueltmann

Lake of the Ozarks, MO