

# Lateral Lines

President Message (3/18/20):

It's been an unusual past few weeks with the coronavirus making its way into the U.S. Events and activities both on national and local scales have been cancelled or postponed. Restaurants and other businesses are being closed, toilet paper is in high demand (go figure), and everyone is feeling the impacts of the virus in one way or another. It has been a rapidly evolving situation and it seems that the only thing not offering any change are vending machines ☹️. In all seriousness, I hope this message finds you well and I encourage everyone to take the appropriate precautions to limit the risk of getting and spreading the coronavirus.

This past February we had our Spring Meeting at Turkey Run State Park. The meeting marked the 50<sup>th</sup> anniversary of our Chapter. To commemorate we were blessed to have three of our longest serving members, Dr. Tom McComish, Ed Braun, and Bob Robertson. Dr. McComish gave us a great presentation on the history of IAFS filled with lots of great memories, advice and achievements. After the presentation Tom, Ed, and Bob participated in a panel discussion where questions were asked by the moderator and members of the audience. It was great time of reflection of how the Chapter started, where it has come, and the current challenges and opportunities it faces. I would like to extend a big thank you to Tom, Ed, and Bob along with all the members of EXCOM who put a lot of work into planning and executing the meeting!

As of now we are still planning on having our Fall meeting which will likely be in October. There will be more details to come as we approach October. If you have an idea or suggestion for a continuing education opportunity at the meeting feel free to contact me at ([daniel.ardt@duke-energy.com](mailto:daniel.ardt@duke-energy.com)). Also, if you are interested in serving as the chair for the Continuing Education and/or Legislative Communication Committees please let me know.

I would like to wish everyone a productive and safe field season! Here's to 50 years of promoting fisheries science in Indiana and another 50 plus years of continuing the momentum!

Thank you for the opportunity to serve as your president,  
Daniel Arndt



## Current Officers

**President:**

***Daniel Arndt***

**President Elect:**

***Rob Ackerson***

**Vice President:**

***Kevin Gaston***

**Past President:**

***Drew Holloway***

**Secretary/**

**Treasurer:**

***Ken Wetzel***

**Newsletter Editor:**

***Tom Bacula***

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## Mission Statement

The Indiana Chapter of the American Fisheries Society (IAFS) supports the conservation of fisheries and aquatic ecosystems in Indiana by promoting professional excellence in fisheries science, management, and education.

On March 13, 1970, a group of 31 fisheries and aquatic professionals met to establish the Indiana Chapter of the American Fisheries Society. Under the chairmanship of Gary Doxtater, the organizational committee of Frank Lockard, Gary Doxtater, Thomas McComish, and George Hansen had already acquired our charter from the parent society, at that time celebrating its 100th anniversary. By-laws were adopted, annual dues were established, meetings were proposed, and officers were elected at the first meeting in Indianapolis.

## Mark your Calendar



AMERICAN FISHERIES SOCIETY

**150<sup>th</sup> Annual Meeting**

COLUMBUS, OHIO, AUG 30 - SEPT 3, 2020

**Fish with a Fishhead at  
Indiana State Fair  
8/22/20**

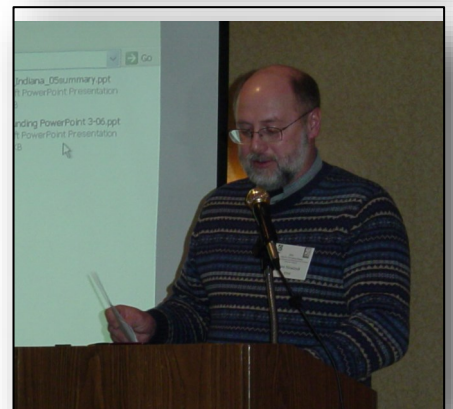


## Feature Item

# 50<sup>th</sup> Anniversary of Indiana Chapter of the American Fisheries Society

Thank you Dave Kittaka for the submission of photos.

Spring 2006 annual meeting.



## Feature Item

# 50<sup>th</sup> Anniversary of Indiana Chapter of the American Fisheries Society



Above: Awards at Fall 2007 meeting.

Below: Awards at Fall 2008 meeting.



## Feature Item

# 50<sup>th</sup> Anniversary of Indiana Chapter of the American Fisheries Society

2008 Midwest FWC conference. Most active Small Chapter and Communication awards.



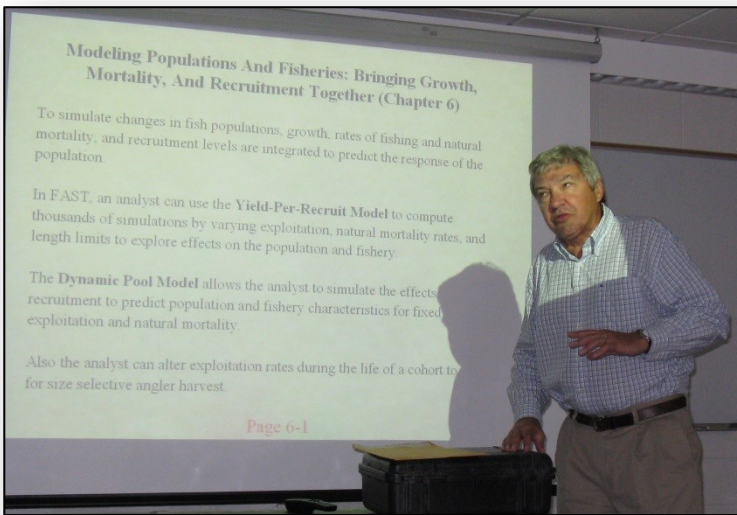
Jay Beugley, 2008 Joan Duffy Travel Award Recipient.



## Feature Item

# 50<sup>th</sup> Anniversary of Indiana Chapter of the American Fisheries Society

Workshops at meetings: FAST presented by Macenia and a spine aging workshop.



## Feature Item

# 50<sup>th</sup> Anniversary of Indiana Chapter of the American Fisheries Society

2009 Spring Meeting



2009 crew at State Fair Fishing pond.



## Secretary Report—Ken Wetzel

2020 IAFS Spring Business Meeting Minutes  
Turkey Run State Park  
Marshall, IN  
February 19, 2020

### Call to Order

Daniel Arndt called the meeting to order at 8:05 am.

### Establish Quorum

Quorum was established.

### Agenda additions/Deletions

There were no additions or deletions

### New Members

Chris Flack - President of Biomonitor

### Secretary Report – Ken Wetzel

Daniel asked if anyone had any questions or edits to the fall 2019 business meeting minutes. The fall minutes were approved.

### Treasurer Report – Ken Wetzel

The financial and investment reports were handed out. It was stated that the checking account has \$5,700.71, \$2,256.90 in the PayPal account and \$12,183 in investments.

### Committee Reports

#### Awards – Rob Ackerson

Rob thanked the judges for participation. He mentioned that Bri Ciara was awarded a fall secretary treasurer award, and she has yet to receive it.

#### Program Chair –Rob Ackerson

No report.

#### Membership Report –Kevin Gaston

We currently have 68 members, 57 through the parent society, and 11 through checks and PayPal.

#### Nominations – Drew Holloway

Daniel Arndt stated Jay Beugly is interested in running for vice president, although he was not in attendance. Daniel asked if anyone present was interested in running for vice president, no one responded. The Election will take place at the fall business meeting.

#### Resolutions – Dan Carnahan

No report.

### Communications

#### Newsletter – Tom Bacula

The spring newsletter has a deadline of early April, Tom issues his first call for submissions. He suggested than any members with a tenure of 20 years or more provide a short write up or comment about what AFS means to them for the newsletter. Tom also called for any historic photos to add to the newsletter.



## Secretary Report—Ken Wetzel

### Website – Nick Haurert

Nick Haurert stated that the website does currently work, but is very buggy, and is in the process of being switched over. We are planning to use the AFS Parent Society website template. This new website should be user friendly and all currently available information will be transferred over.

### Social Media – Andy Beultmann

Andy Beultmann stated things are going well and encouraged membership to keep posting some spring photos of our work.

### Ad Hoc Committees

#### Continuing Education – Steve Andrews

Steve stated that the activities from the fall meeting were mentioned in the fall newsletter, and he has nothing to report.

Steve is planning on stepping down and stated that we need a chairman to replace him. Those interested should see Steve or EXCOM.

#### Certification – Megan Gunn

No report.

#### Legislative – Vacant

Daniel Arndt explained that this position is still vacant. Those interested should see EXCOM.

#### History and Archives – Mark Pyron

No report. Daniel Arndt mentioned that if you find anything old and AFS related, please send it to Mark.

#### Outreach – Clint Kowalik

The state fair event went very well, but attendance was down. Around 150 kids and parents participated. Clint mentioned having more volunteers this year and having a post state fair event. He mentioned that high school students, college students, and master naturalist students are good target audiences for promoting our organization. Master naturalist students are required to volunteer to get their certification and pin, so it's a win for us and them. Clint taught a fishing class at Butler, and has taught Indiana fish to a few master naturalist classes. Clint challenged everyone in attendance to speak to a group of students this year to promote our organization.

### Technical Committees

#### Rivers and Streams – Kayla Werbianskyj

Kayla Werbianskyj stated she is working on putting together the 2019 rivers and streams technical committee report. The deadline is the end of February 2020, and she requested that anyone wishing to submit anything should do so promptly. The rivers and streams technical committee meeting is scheduled for late march/Early April this year.

#### Centrarchid – Kevin Gaston

Kevin has an 11 page NCD report that he plans on sending out to everyone. He has requested than anyone working with centrarchids to send him the info because he had no responses last year.

#### Esocid – Nick Haurert

The IDNR completed 3 northern pike and 2 musky surveys this year. The NCD will have its own stocking symposium at the national commission this year.

## Secretary Report—Ken Wetzel

### Walleye – Corey DeBoom

The joint meeting of the walleye technical committee and esocid committee will be held at the University of Wisconsin Kemp Research Station July 20-23. There will be a workshop on photography and video production skills if anyone is interested please contact Corey. The walleye technical committee is now posting audio of their meetings on their NCD website. The walleye technical committee is planning a 2021 symposium with the theme being system change. In 2019, the state of Indiana has completed a new walleye strategic plan. Sauger, saugeye and walleye limits on the Ohio River have changed from six fish bag limit with no size limit to a six fish bag with a 14 inch minimum size limit.

### Ictalurid – Craig Jansen

Craig Jansen was currently attending the Catfish 2020 Symposium.

### Reservoirs – Sandy Clark-Kolaks

Sandy Clark-Kolaks stated that she was unable to attend the Midwest conference, Andy Buelmann went in her place. At Midwest, there was much discussion about joint state collaborative projects, looking at how shad are moved around, and setting up an inventory measuring renovations projects successes throughout the states to get an idea of characteristics and conditions that are favorable.

## Student Subunit Reports

### Ball State

No report.

### Purdue

Mitch Zischke, the Purdue academic advisor said that they have around 25-30 active members. And they won the most active student subunit award at the Midwest conference. When asked about how to improve student attendance at Indiana AFS meetings, Mitch stated that the students in his chapter tend to seek out larger meetings, including the Midwest conference, and the Western division conference because many students wish to pursue careers outside of Indiana. Daniel Arndt mentioned having future meetings in Lafayette and Muncie to increase student turnout because it has worked well in the past.

### Manchester

Manchester no longer has an environmental science program. The student chapter has been disbanded.

### Indiana

No report, Sandy mentioned they are still having meetings and participating in club activities.

## Unfinished Business

### State fish update – Daniel Arndt

Daniel stated that Drew Holloway believes that the only way to move forward with a state fish is by a student subunit reaching out to legislators. Drew will be reaching out to student sub units to gauge interest before the spring newsletter.

### New Logo – Daniel Arndt

Drew Holloway has a few designs for the new Indiana AFS Logo, and he will include them in the spring newsletter to receive feedback.

## New Business

### NCD Update – Daniel Arndt

Daniel attended the NCD business meeting at the Midwest conference. The national president of AFS was there, he spoke about the new waters of the US and climate change. The NCD president is working on he-

## Secretary Report—Ken Wetzel

roes of fisheries awards which involves finding new ways to recognize contributing members. He wants a copy of all abstracts and titles from the various state chapter spring meeting presentations to post on the NCD website to inform people of the research and projects that are going on here in the Midwest. He also has been sending out weekly articles to chapter presidents that cover an array of fisheries topics. The NCD is also going to try to send officers to chapter meetings. Drew Holloway is currently the NCD secretary/treasurer.

### **Bylaws amendment-membership**

Daniel read through the bylaws and procedures in two different documents and noticed that the definition of membership is different. Page one of the bylaws states you need to be a parent society member to be a local chapter member, but the procedures state you do not have to be a parent society member to be a local chapter member. This excludes students. Daniel suggested we amend the bylaws to match the procedures so you do not have to be a parent society member in order to be a member of the Indiana chapter. Daniel said he would reach out to the parent society constitutional consultant to see what needs to be done. If a motion is approved to change either the bylaws or the procedures, we will have to vote on it.

### **Bylaws amendment- attendance requirement**

Our bylaws state that we need to have 1/3 of our members present to establish a quorum to conduct business. The bylaws of other Midwest chapters require 1/4 of its members to be present to conduct business. Our issue is with the fall meeting, where attendance is less than 1/3 of our members. Daniel suggested we change our bylaws to require only 1/4 of our members to be present to conduct business.

Daniel made a motion to amend the bylaws, changing the required attendance of 1/3 to 1/4 members required to establish a quorum to conduct business.

The motion was seconded.

The motion was voted on and unanimously in favor.

Daniel will reach out to the parent society constitutional consultant to get more information about changing our bylaws.

### **Procedures amendment, Gmail account**

Our procedures state that the secretary/treasurer should maintain a Picassa account, which is no longer in use. Daniel suggested this information should be removed from the Procedures.

Daniel made a motion to amend the procedures, removing the requirement of our chapter to maintain a Picassa account.

The motion was seconded.

The vote was unanimous in favor of removing the Picassa account.

### **Bylaws amendment – Manchester**

Daniel made a motion to change the bylaws and procedures to remove the Manchester student chapter.

## Secretary Report—Ken Wetzel

The motion was seconded.

The vote was unanimous in favor of removing Manchester.

### Nominations for New Officers

#### Vice President

Daniel made the motion to close nominations.

The motion was seconded.

We voted to close nominations, all were in favor.

No one present was interested in running for office, Daniel stated Jay Beugly is interested in running for vice president.

### Additions

Steve Andrews mentioned retired members do not attend meetings like they have in the past, and suggested an overall reduced registration cost, or a one day registration option that would be less expensive. He mentioned the parent society does this, and the Indiana chapter of the Wildlife Society does this as well.

Steve Andrews made a motion to decrease retiree registration rates and offer one day registrations.

Daniel Arndt made an amendment to Steve's motion to change the procedures to include one-day rates and reduced rates in the section about planning a meeting.

The motion was seconded.

The vote was unanimous, all were in favor.

### Announcements

Daniel Arndt announced that Jay Beugly will be our new vice president after the fall meeting.

Kevin Gaston stated that our email list is not complete, and please see him to be added.

### Adjourn

Daniel Arndt adjourned the meeting at 9:10 am.

## Secretary Report—Ken Wetzel

### Indiana Chapter of the American Fisheries Society

#### Financial Report

For the Period 12/10/2019 – 3/30/2020

INCOME		DISBURSEMENTS	
<b>Dues, registration fees, grants, and miscellaneous</b>		<b>Operating expenses, contributions, gifts, donations, and miscellaneous</b>	
2020 Annual Dues	\$ 167.05	Spring meeting/Turkey Run facilities deposit	\$ 250.00
		Registration reimbursement for Bob Robertson and Ed Braun	\$170.00
2020 Spring Meeting Registration	\$ 3935.99	Awards for plenary speakers(maps of Indiana waterways and frames)	\$ 96.27
2020 Sponsorships	\$ 1714.85	Donation to Walleye Technical Committee to publish 2 pages in the 2021 Walleye Symposium	\$ 300.00
		Turkey Run facility, meals, and drinks for Spring meeting	\$ 2030.15
		Annual Hostgator website Fee	\$ 221.39
TOTAL Income		TOTAL Disbursements	
	\$ 5,817.89		\$ 3,067.42
<b>Assets as of: 12/10/2020</b>		<b>Assets as of: 3/30/2020</b>	
Checking 1084	\$ 4,315.71	Checking 1084	\$ 7509.29
PayPal	\$ 459.81	PayPal	\$ 363.11
Investment	\$ 12,068.00	Investment	\$12,919.00
TOTAL	\$ 17,843.52	TOTAL	\$20,791.40
Prepared by Ken Wetzel IAFS Treasurer 3/30/2020			

## Secretary Report—Ken Wetzel

See Ken if you have questions or want more in-depth info on the AFS investment account.

### AFS Managed Unit Investment Program

**Fund or Unit Name:** Indiana Chapter  
**For the period ending:** 12/31/2019

<b>Contributions</b>	<b>Date</b>	<b>Amount</b>
	10/17/2017	<u>\$10,000</u>

Total Invested

<b>Description</b>	<b>Calendar Year</b>	<b>Year-to-Date</b>	<b>Year-to-Date</b>
	<b>2017</b>	<b>2018</b>	<b>2019</b>
Beginning Balance	\$0	\$11,419	\$10,821
Contributions / Withdra	\$10,000	\$0	\$0
Income	\$235	\$506	\$532
Gains / Loss	\$1,236	-\$1,046	\$1,659
Fees	-\$52	-\$58	-\$93
Ending Balance	<u>\$11,419</u>	<u>\$10,821</u>	<u>\$12,919</u>

## Chapter News

### **Awards Committee—Rob Ackerson, Chair**

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 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:

**Seth Bogue**—*Using a Time-Lapse Camera to Estimate Recreational Usage of a Remote Lake*

Best Student Paper:

**Jessica “Jilt” Weir**—*Invasion Superhighways: Recreational Smartphone Data Reveals Patterns in the Human-Mediated Spread of Exotic and Invasive Species*

Best Student Poster:

**Torrey Blevins**—*Assemblage Structure of the Wabash River: Trophic Position and Species Interactions Response to Silver Carp Invasion*

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

Drew Holloway

Tom Bacula

Andrew Ault

Kevin Gaston

Alexander Ingersoll

Kayla Werbianskyj

Ken Wetzel

Clint Kowalik

Dan Arndt

Rob Ackerson

I apologize if I missed anyone who judged or misspelled their name

\*The Best Student paper and poster will be awarded at the fall meeting and will receive a certificate. 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)

### **Newsletter Editor—Tom Bacula**

NOTE: SOME SUBMISSIONS OCCURRED BEFORE SOCIAL DISTANCING. Thank you to all who submitted information to the newsletter. Please send your field pictures into the Facebook group. Contact Tom if you have any comments or suggestions. The next newsletter submission due date will be mid-October (tentative 10/15/2020).

### **Continuing Education—Steve Andrews, Chair**

If you are interested in serving as the chair of the Continuing Education Committee, please let the EXCOM or myself know.

## Chapter News

### Rivers and Streams Technical Committee, Kayla Werbianskyj

The 2020 NCD Rivers and Streams Technical Committee Spring Meeting was cancelled due to COVID-19 pandemic.

### Esocid Technical Committee, Nick Haurert

#### Learn to Fish for Muskie Workshop

The Indiana Department of Natural Resources (IDNR) held its first Learn to Fish for Muskie Workshop on October 12, 2019. A total of 21 participants attended the 3 hour classroom based workshop at Fort Harrison State Park. The Learn to Fish Muskie workshop was designed to teach beginners the skills needed to Muskie fish on their own. Participants were taught about Muskie biology, handling, fishing tackle, seasonal fishing techniques, and where they can fish for Muskie in Indiana.

#### Muskellunge Egg Collection

In April of 2019, the IDNR collected over 350,000 eggs from Muskellunge in Lake Webster. A total of 23 females were stripped that ranged in size from 31.6 inches to 43.8 inches and a total of 43 males were used that ranged from 28.2 inches to 37.5 inches in length. East Fork State Fish Hatchery reported an 84% hatch rate resulting in an estimated total of 317,200 fry. All 13 Indiana Muskellunge Program lakes received their full requested stocking rates (15,394 fingerlings total).

#### Targeted Muskellunge Surveys

**Objective:** Monitor the status of glacial lake Muskellunge (*Esox masquinongy*) populations by describing the population catch-rate and size structure for two Indiana glacial lakes surveyed in April of 2019.

**Gear & Effort:** The two lakes sampled in April of 2019 were Bruce Lake (Pulaski Co.) and Lake Tippecanoe (Kosciusko Co.). Eight overnight trap net (Small Lake Michigan style) lifts were deployed at each lake.

#### Results:

Bruce Lake - A total of 16 Muskellunge was collected that ranged in length from 23.6 to 47.5 inches. The Muskellunge sampled in this survey had an average length of 37.6 inches.

Lake Tippecanoe - A total of 3 Muskellunge was collected at that range in length from 36.5 to 46.0 inches.



Bruce Lake



## Chapter News

### Continued, Esocid Technical Committee—Indiana Representative, Nick Haurert Targeted Northern Pike Surveys

**Objective:** Monitor the status of glacial lake Northern Pike (*Esox lucius*) populations by describing the population catch-rate and size structure for three Indiana glacial lakes surveyed in March of 2019.

**Gear & Effort:** The three lakes sampled in March of 2019 were Diamond (Noble Co.), Silver (Steuben Co.), and South Twin (LaGrange Co.) lakes. Eight overnight trap net (Small Lake Michigan style) lifts were deployed at each lake.

#### Catch-Rate & Size Structure:

Table 1. 2019 survey catches and average (interquartile range) Northern Pike catch per 8 overnight trap net (SLM style) lifts by size category at seventeen glacial lakes from 2012-2019.

	<Stock	Stock	Quality	Preferred	Memorable	Trophy	Total
Diamond	0	0	8	1	0	0	9
Silver	1	0	2	2	1	0	6
South Twin	0	0	0	0	0	0	0
1 <sup>st</sup> Quartile	0	0	5	2	0	0	9
Median	0	0	11	5	1	0	17
3 <sup>rd</sup> Quartile	1	3	18	7	2	0	27

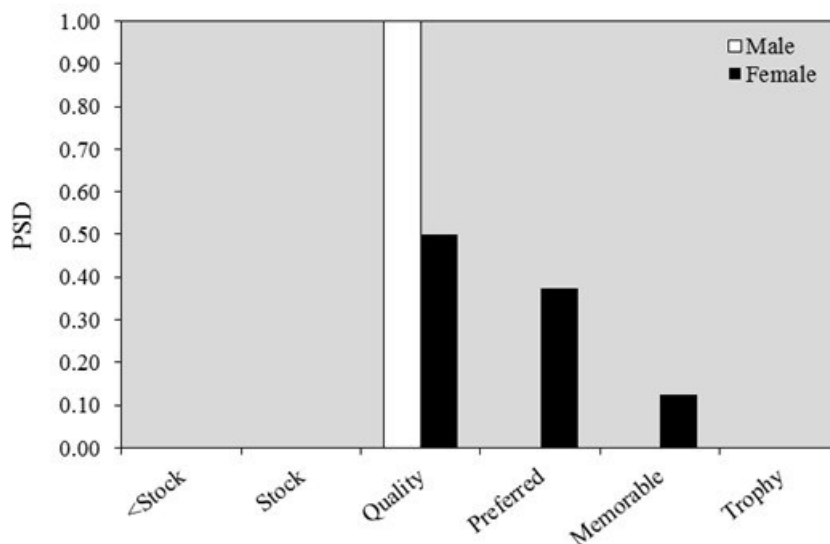


Figure 1. Proportional size distribution (PSD) of female and male Northern Pike collected during 2019 targeted surveys by size category.

## All in a Days Work

### Aquatic Control: Wes Goldsmith

The Aquatic Control Fish Management team is excited to get started on our busy spring schedule. We have several electrofishing surveys to get done as well as some stockings and habitat improvement work. We are most excited about returning to some of the properties we have done some extensive work on in the past year or two to track our progress. One project in particular is a 2 acre pond that had poor water quality (low pH, alkalinity, hardness), no habitat of any kind, extremely overabundant and stunted Bluegill, and a very low density of Largemouth Bass with no apparent recruitment in recent years. The individual Largemouth Bass present were doing very well and had very high relative weights but there just weren't many of them out there. The client allowed us to address all of these issues. We performed a liming treatment to raise pH, alkalinity, and hardness. Artificial structure was added throughout the pond. A fish feeder was set up with a high quality Bluegill feed and a small stocking of Largemouth Bass was added to thin out the overabundant Bluegill and hopefully raise the clients catch rate of Largemouth Bass. We will be returning to the pond this spring to check up on it but we already have some anecdotal evidence from the customer that everything is working according to plan. We are anxious to get some real data in front of us to track the progress in just one year. Aquatic Control would like to wish all of you a fun and productive field season this year. Be safe out there!

### Indiana Department of Environmental Management/Office of Water Quality/ Watershed Assessment and Planning Branch : Kayla Werbianskyj

#### Monitoring Results from 2019

Collections for the year 2019 focused on the Tributaries to the Ohio River as well as other targeted watersheds throughout the state (Driftwood, Flatrock-Haw, Lower East Fork White, Lower White, Middle Wabash-Busseron, Middle Wabash-Deer, Muscatatuck, Patoka, St. Joseph, Upper White, and Wildcat). A total of 122 fish community samples were collected from 115 sites resulting in the capture of 33,320 individuals representing 104 different species.

#### Probabilistic Monitoring

The Watershed Assessment and Planning Branch (WAPB) collected 43 samples at 39 sites in tributaries of the Ohio River Basin (14 counties including: Clark, Crawford, Dearborn, Floyd, Harrison, Jefferson, Ohio, Perry, Ripley, Spencer, Switzerland, Vanderburgh, Warrick, and Washington). A total of 63 species were collected and 8,449 individuals identified. Species of note included: Spottail Darter and Smallmouth Redhorse. Nine sites scored in the "Excellent" range of the Index of Biotic Integrity (IBI) (scores of 53-60):



Spottail Darter (*Etheostoma squamiceps*), Warrick County

## All in a Days Work

Site	Waterbody	Location	County	Total IBI Score
19013/19013.5*	Blue River	Cauble Road	Washington	54/56
19003	Tanners Creek	Kelsey Road	Dearborn	56
19034	Indian Creek	Hamby Road	Floyd	54
19027	Little Blue River	Old SR 37	Crawford	54
19017	Buck Creek	Squire Boone Caverns	Harrison	54
19018	Indian Creek	Old Vincennes Road	Floyd	54
19033	Indian Creek	SR 335	Harrison	54
19009	Indian Creek	Posten Road	Switzerland	54

\*19013.5 is a quality assurance revisit of site 19013

Ten sites scored an IBI of less than 36, which is considered impaired for biology. The most impacted site was 19036 on Coles Creek in Warrick County with a score of 16.

### Reference Site Monitoring

In 2019, WAPB staff completed its 5<sup>th</sup> year of Reference Site monitoring (goal of 250 sites sampled in 10 years). Of approximately 1200 previously sampled sites, these sites were projected to have the best relative surrounding land use, QHEI score, and water chemistry parameters for supporting aquatic life.

Thirty-three samples were collected at 30 sites (eight counties including: Greene, Henry, Lawrence, Madison, Monroe, Morgan, Owen, and Shelby). A total of 65 species were collected and 8,162 species identified.

Species of note included: Eastern Sand Darter and Harlequin Darter. Six sites scored in the “Excellent” range of the Index of Biotic Integrity (IBI) (scores of 53-60):



Smallmouth Redhorse (*Moxostoma breviceps*), Ohio County

Site	Waterbody	Location	County	Total IBI Score
19R117	Raccoon Creek	Heddings Road	Owen	58
19R106	Brandywine Creek	SR 9	Shelby	58
19R132	Rattlesnake Creek	Hyden Road	Owen	56
19R107	Big Blue River	N Morristown Road	Shelby	56
19R105	Lick Creek	1025 S	Madison	54
19R111	North Prong Stotts Creek	Firestation Road	Morgan	54

Two sites scored an IBI of less than 36. The most impacted site was 19R116 on Tributary of Richland Creek in Monroe County with a score of 30.

## All in a Days Work



Harlequin Darter (*Etheostoma histrio*), Shelby County

Eastern Sand Darter (*Ammocrypta pellucida*),  
Shelby County

### Watershed Characterization

Watershed Characterization monitoring provides valuable data for the purposes of TMDL development and watershed management planning. Study areas are selected based upon Total Maximum Daily Load (TMDL) development needs, and where there is a successful CWA 319 planning grant application. The water quality data collected through the watershed characterization monitoring provides the data needed to identify the potential sources and extent of impairment for TMDL development and for local watershed groups to designate critical areas and management decisions for their watershed management plans. Monitoring in 2019 focused on Laughery Creek watershed (HUC 0509020305) in the counties of Ripley and Franklin. There were 27 samples collected at 24 sites. There were 45 species collected and 6,892 individuals identified. Three sites scored in the “Excellent” range of the Index of Biotic Integrity (IBI) (scores of 53-60):

Site	Waterbody	Location	County	Total IBI Score
19T021.5/19T021	Laughery Creek	CR 450 N	Ripley	56/54
19T012	Laughery Creek	SR 48	Ripley	54
19T019	Laughery Creek	SR 350	Ripley	54

Two sites scored an IBI of less than 36 – 19T027 (Tributary of Ripley Creek in Ripley County and 19T010 (North Branch Ripley Creek in Ripley County).

### Performance Measures’ Monitoring

The objective of monitoring these sites is to document water quality improvements following implementation of a watershed management plan. The WAPB collected fish communities at 13 sites located in the counties of Carroll, Clinton, Dearborn, Dubois, Jefferson, Pike, and Ripley as part of performance measures’ monitoring to determine if there are improvements in the biological integrity of the sites. There were zero sites that scored below 36 on the IBI for fish community. Two sites received a score of 50: 19W001 (South Hogan Creek in Dearborn County) and 19W005 (Big Creek in Jefferson County). Site 19W005 is located in Big Oaks National Wildlife Refuge.

### Fish Tissue Contaminants Monitoring

Fish tissue contaminant samples from our 2019 sampling efforts (Lower Wabash River Basin) were sent to the analytical laboratory in December. Data results are anticipated to be received by the end of April 2020, at which time results will be incorporated into Indiana’s Integrated Report, the 303(d) List of Impaired Waters, and the Indiana State Department of Health’s Indiana Fish Consumption Advisory. Plans are underway for

## All in a Days Work

2020 fish tissue sampling in the Great Lakes and Ohio River basins. The fish consumption advisory workgroup, comprised of members from DNR, ISDH and IDEM, has worked diligently to incorporate the data from this program in the Indiana Fish Consumption Advisory (<https://www.in.gov/isdh/23650.htm>) which has a new interactive map format.

In 2017, IDEM began looking at per- and polyfluoroalkyl substances (PFAS) in fish tissues. PFAS are a group of man-made chemicals that have been manufactured and used in a variety of industries around the globe since the 1940s. PFAS are found in a wide range of consumer products such as anti-stick cookware, stain repellants, and food packaging, as well as certain industries like aerospace and automotive, metal plating, and fire suppression. Some of the chemicals are very persistent in the environment, and can cause adverse health outcomes in humans. Of the PFAS compounds, perfluorooctanesulfonic acid (PFOS) tends to bioaccumulate in the tissues of fish, and we have found it in 100 percent of the samples analyzed. Historically, fish consumption advisories have been driven by mercury and polychlorinated biphenyl (PCB) concentrations, however, based on PFOS data collected in 2018 the first fish consumption advisories based on PFOS concentrations were issued in the state. While analytical resources are limited, IDEM plans to continue analyzing these forever chemicals in fish to establish background conditions and identify elevated concentrations around the state. For more information on IDEM's contaminants monitoring program or to inquire about fish tissue contaminants data, contact IDEM Watershed Assessment and Planning Branch staff members Ali Meils, at [ameils@idem.IN.gov](mailto:ameils@idem.IN.gov) or (317) 308-3204 or James Stahl, at [jstahl@idem.IN.gov](mailto:jstahl@idem.IN.gov) or (317) 308-3187.

### Additional projects

IDEM conducted fish and macroinvertebrate community sampling in three lakes as part of a new effort to create a future multi-metric indices for assessing fish communities in lakes. Lakes sampled included Lake Lemon (Monroe County) as well as Pigeon Lake and Fox Lake (both located in Steuben County).

Fish and macroinvertebrate community sampling was also conducted in Turtle Creek, upstream and downstream of Turtle Creek reservoir. This data was used to help further the understanding of the response of these biotic communities to thermal discharges, and to assess for impaired biotic communities.

### Monitoring efforts in 2020

- **Probabilistic Monitoring:** Sampling will be focused on waterbodies in the White River Basin (West Fork) in Central and Southern Indiana. The goal is to sample 38 sites in the basin. Data to be collected at these randomly generated sites include: water chemistry, bacteriological, algal, macroinvertebrate communities, fish communities and habitat quality.
- **Reference Site Monitoring:** Sampling will occur at 25 sites in the Wabash River Basin. Site selection is still in process and includes 8-digit hydrologic unit codes (HUCs) 05120105, 05120106, 05120107, 05120108, 05120110, 05120111, and 05120203; counties of Boone, Carroll, Clay, Clinton, Fountain, Montgomery, Parke, Putnam, Sullivan, Tippecanoe, Vermillion, and Warren.
- **Watershed Characterization:** Sampling will occur at 21 targeted sites in the Maria Creek Watershed (HUC 0512011118); counties of Knox and Sullivan as part of a watershed characterization study and Total Maximum Daily Load project.

## All in a Days Work

- Performance Measures' Monitoring: 17 sites will be located in the following counties: Allen, Benton, Clark, Clay, Clinton, Dearborn, Huntington, Ripley, Sullivan, and Wells. The 2020 sites will be sampled in reference to a historical impairment and could include biological, chemical, and/or bacteriological sampling.
- Fish Tissue Contaminants Monitoring: Sampling will occur at targeted sites in lakes and rivers/streams in the Great Lakes Basin and Tributaries of the Ohio River.
- White River Mainstem Project: Sampling will occur at 65 sites along the West Fork White River and White River in a collaborative project with the DNR and Muncie Bureau of Water Quality.

### IDNR Fish Management District 1: Tom Bacula

It has been quite an interesting start to the year as we social distance ourselves for the foreseeable future. I was able to get in one spring survey in the nick of time. The survey was at Wolf Lake a border water with Illinois and a home run away from Lake Michigan. This survey used a variety of volunteers from the public, IDEM, and fish biologists from the Cook County Forest Preserves District (CCFPD) in Illinois. CCFPD biologists after assisting with survey they were headed to clean out their offices for "remote work." They were amazed by our Small Lake Michigan style trap nets and big boat for running them. It was great to have a collaborative effort with them to learn about what they do and how the border water could be better managed. While this survey was targeting Northern Pike, it was Walleyes that stole the show. Over the eight net lifts we ended with 57 Walleyes including 24 over 20 inches and nine over 5 lbs. Pretty darn good for a privately stocked fishery. Looking a head to the hopeful field season, the most interesting location for is a glacial lake on The Nature Conservancy owned property that has a variety of remnant high quality habitats and species.

Stay Safe and Socially Distanced.

Below: Bruce Caruso with Perch America who's organization has stocked Wolf Lake for 20 years.. Above his head are high tension power lines and less than 15 miles is downtown Chicago. Not quite the usual background as most of Indiana's surveys.



## All in a Days Work

### IDNR Fish Management District 5: Dave Kittaka and Paul Stockebrand

Like everyone else we are under a statewide travel ban because of the Covid-19, fortunately at this time all of our personal and fisheries families are doing fine and taking the appropriate precautions. In the months before the travel ban we were able to install a new Infinity electrofishing system and rewire the LED lights. Field season started early this year in late winter and early spring we assisting South Fish Research collect and tag crappie for a crappie exploitation study at West Boggs. 2020 will mark the 6 year anniversary of the West Boggs Lake renovation. We started a creel survey in early March as part of the evaluation of the recovery of the fishery. We conducted our annual Viral Hemorrhagic Septicemia (VHS) fish collection for Driftwood State Fish Hatchery in conjunction with a spring crappie survey at Starve Hollow Lake. Over the course of a week we collected 118 Black crappie ranging in length from 2.5 to 14.5 inches. Besides crappie we collected some impressive representatives of the fish community at Starve Hollow Lake. See pictures.

If we are able to travel for fish surveys and work in a boat together we are going to conduct Status and Trends surveys at Starve Hollow Lake, Jackson Co., Spurgeon Hollow Lake, Jackson Co., Lake Lemon, Monroe Co, and Spring Mill Lake, Lawrence Co. Fall work will include a joint project with IDEM to survey the West Fork White River as part of the 20 year anniversary of the White River Fish Kill.

Seth Bogue, Andrew Ault, Paul Stockebrand Julia Buchanon-Schwank and Dave Kittaka in pictures.



# All in a Days Work





## All in a Days Work

### IDNR Fish Management District 5: Andy Bueltmann

Since fall, District 6 Fisheries has been concentrating on enhancing in-lake fish habitat at Patoka Lake. Executing this project has taken a great amount of effort involving the help of many people within not just our own division, but other divisions within the DNR, local businesses, angling groups, and volunteers. Patoka Lake State Park staff have been vital to this operation as they have assisted with planning volunteer days, coordinated pallet drop offs, assisted with building and placing structures, felled trees, and have allowed us to use their facilities to build structures and host volunteer days. Along with State Parks we had help from within our own division including South Fisheries Research, Big Rivers, District 4 fisheries, District 5 fisheries, and Public Access South who have helped with planning, volunteer build days, and placing structures. In December we had our first volunteer



Volunteer Build Day December 7<sup>th</sup>, 2019.

build day which was made possible due to the donations of pallets from numerous local businesses and angling groups including Jasper Group, Dubois County Sportsmen's Club, Bass Unlimited, Indiana Bass Federation's (IBF) Tri-County Bass Anglers Club, IBF's River City Bassmasters Club, Patoka Hills chapter of Quail and Upland Game Alliance, and Kimball Electronics. During this build day we had a 33 volunteers

show up who built 129 pallet structures in less than 2 hours. Along with the pallet structures, the Tri-County Bass Anglers Club acquired a \$1,000 grant to build 20 Hoosier Cubes which they completed building by the volunteer build day. All of these structures were placed in the lake the following week thanks to the donation of over 1,000 cinderblocks by Dubois County Block and Bricks and to the help of all the aforementioned partners.



Zac Clark (Assistant Property Manager for Patoka Lake State Park) in the skidsteer being guided by Brian Finch (Wildlife Specialist for Patoka Lake State Park) to load a structure built by volunteers onto the trailer so that it can be staged at the boat ramp.

In March we had planned another volunteer day which we had to cancel due to the COVID-19 outbreak, but we still managed to build 34 structures on that day with the help of State Parks staff and one volunteer who showed representing BASS Nation. Following that day, with the help of SFR, Big Rivers, and Public Access we built 40 more for a total of

## All in a Days Work

88. With another donation of around 500 cinderblocks by Dubois County Block and help from SFR, Big Rivers, and Public Access South we were able to place 74 of the 88 before we were put on lockdown from COVID-19. During this time, the Tri-County Bass Anglers Club built an additional 20 Hoosier Cubes which will be placed along with the remaining 14 pallet structures as soon as we can resume field work safely. To this point we have placed 203 pallet structures, 18 Hoosier cubes, and have felled over 300 trees in Patoka. As a part of this habitat enhancement project we have been working with the Indiana Bass Federation who has been raising funds to stock Large-mouth in Patoka. Currently we are working with South Fisheries Research to write up a research plan that will evaluate if the stockings and habitat enhancement efforts are successful so stay tuned for some future results.



Loading structure onto pontoon boat. Sam Peterson and Craig Jansen from the Big Rivers crew load up a structure being delivered by Wayne Meyers in the skidsteer (Sugar Ridge laborer).



Left: Full load headed out for deploying.

Right: Wayne and Paul Stockebrand (Assistant D5 fisheries biologist) deploy a structure into the water.

Below: Boat full of Hoosier Cubes.



## All in a Days Work

### IDNR South Region Fisheries Research: Sandy Clark-Kolaks and Seth Bogue

The Southern Fisheries Research (SFR) team hit the ground running at the start of 2020. We began field work for a black crappie tagging study at West Boggs Lake the second week of the year. Over the course of a month, we tagged more than 1,000 fish ranging in size from 7 – 12 inches with yellow Floy tags. The tagging study will run concurrently with an angler creel survey at the lake between March and October of this year. Combined data from the tag return study and creel survey will help us estimate fishing pressure and harvest at West Boggs Lake with implications for potential future management regulations.

In mid-March, the SFR team conducted the annual spring crappie survey at Dogwood Lake to monitor the 9 inch minimum length limit. We set 2 Lake Michigan style trap nets and 5 smaller standard trap nets for a total of 28 net nights. Our efforts yielded 142 crappie ranging in size from 7.1 – 13.8 inches with 61% of fish over 9 inches. Catch rates were higher than in previous years, likely due to optimal water temperatures. Size structure continues to shift towards larger individuals and condition of fish remains good.



## All in a Days Work

### IDNR Big Rivers Unit: Craig Jansen, Sarah Molinaro, and Sam Peterson

As spring peepers start waking up, so does our chance to get out for an early start to the field season. Current water temperatures reduce the number of Asian carp that jump over our nets, allowing for some productive removal events. Over the course of two days, we removed 585 Silver Carp totaling about 5,400 pounds using paired electrofishing and gill net efforts. We'll continue to sample a variety of other inland river oxbows and backwaters over the next few weeks.

Before the full force of our field season kicks in, one of our first planned activities include assisting with the annual walleye egg-take at Brookville Reservoir. As soon as our shift wraps up, we look south to the Ohio River for some Paddlefish and Asian carp monitoring over the month of April that will take place in accordance with the Ohio River Fisheries Management Team (ORFMT). In May, one of our main goals is to continue our 15-year monitoring efforts of Shovelnose Sturgeon population dynamics in the Wabash River.

As the summer roles on, we'll focus our efforts on projects including (but not limited to): catfish monitoring in the Wabash River, larval and juvenile Asian carp sampling in the Ohio River and tributaries, catfish trot-lining within Newburgh and JT Myers pools of the Ohio River, and assisting IDEM with the White River survey. Short breaks between sampling weeks will provide us time to engage with the public by working the state fair and hosting a Catfish R3 event.

While this spring and summer may be jam-packed with work to be done across districts, I'm sure we can all look forward to the warm weather and time out of the office. I want to wish you all a good 2020 field season and hope you can find some time outside of work to get out and enjoy all that Indiana Department of Natural Resources has to offer.



## Catch of the Day



"If I fished only to capture fish, my fishing trips would have ended long ago."

-Zane Grey



[www.rivertraditions.com](http://www.rivertraditions.com)



Larry Lehman with a Rainbow Trout caught on a mop fly Feb 24<sup>th</sup>, 2020 at Westover Farms, Steelville, Missouri.