

THE LIVING FOSSIL

Volume 2 ISSUE 1 | MAY 2015

IN THIS ISSUE

1st call for abstracts!

PRESIDENTS COLUMN

Society updates

NASPS ANNUAL MEETING

Students voice support

STUDENT SUBUNIT

Scaphirhynchus spotlight

PALLID STURGEON

In the news

**RECOVERY &
HARVEST**



“We may find in the future that sturgeon must migrate to some extent”

HETEROCERCAL TALES

Feature Article: Highlighting sturgeon and paddlefish recovery teams

**ADDRESSING RECRUITMENT
FAILURE: UPPER COLUMBIA
RIVER WHITE STURGEON**



NASPS MISSION STATEMENT



The North American Sturgeon and Paddlefish Society (NASPS) was founded in 2012 at the Annual Meeting of the American Fisheries Society in St. Paul, MN, and is the North American affiliate of the World Sturgeon Conservation Society. Seeking to address current declines in sturgeon and paddlefish populations across North America, NASPS is dedicated to promoting the conservation and restoration of these species by developing and advancing research pertaining to their biology, management, and utilization. Distributing scientific, cultural, and historical information related to sturgeon and paddlefish in North America and encouraging the inclusion of sturgeon and paddlefish fisheries science in college and continuing education curricula is critical to achieving these objectives. As such, NASPS recognizes the importance of engaging NASPS members, local, national, and international government organizations, educational institutions, non-governmental organizations, and the general public through publications, professional meetings, and community events.

THE LIVING FOSSIL

VOLUME 2 ISSUE 1 | MAY 2015

Table of Contents

Letter from the President	3
Society Updates.....	4
NASPS Annual Meeting.....	4
NASPS Member Publications.....	5
For NASPS Announcements.....	5
Join WSCS	5
Species Spotlight.....	6
Sturgeon and Paddlefish in the News	7
Feature Article	9
Upper Columbia River White Sturgeon Recovery Initiative.....	9
Heterocercal Tales.....	14
NASPS Student Subunit	16
Publication Updates.....	18

On the Cover: An Upper Columbia White Sturgeon on the Columbia River near Castlegar British Columbia Canada. Photo Credit: Marco Marrello, Nelson, BC, Canada.

Letter from the President

Dear NASPS Members,

These are exciting times for NASPS! We have announced our first call for abstracts and open registration for our 2015 annual meeting in Oshkosh, WI on October 19-22, 2015. This meeting will be a stand-alone meeting for the society and will not be held in conjunction with AFS or WSCS as in other years. This provides us with incredible flexibility in our meeting organization. We have three workshops, 2.5 days of contributed papers and forum discussions, a poster session, and several social events to offer.

We are also pleased to announce that we will be adding a student subunit to NASPS in 2015. The NASPS Student Subunit will elect a governing board, and the President of the NASPS Student Subunit will be a voting member of the NASPS Executive Committee. The student subunit will be responsible for organizing the Student-Mentor Social, the auction, and the student travel award at/for the annual meetings. They will have space on the NASPS website and in the NASPS newsletter for news and announcements. We will be offering two travel awards (one M.S. and one Ph.D.) for \$250 each to graduate students from Canada and the U.S. who are giving a poster or oral presentation.

More information about the meeting can be found in our newsletter and on our website at <http://www.nasps-sturgeon.org/conferences/north-american-conference-announcements.aspx>. We look forward to your registration and abstracts!

Sincerely,

A handwritten signature in cursive script that reads "Molly A.H. Webb".

Molly A.H. Webb, Ph.D.
President

Society Updates

NASPS Annual Meeting

Abstracts: A reminder that abstracts are due on June 30th 2015 for the NASPS annual meeting in Oshkosh, WI on October 19-22, 2015. This will be a stand-alone meeting for the Society and will provide a great venue for sturgeon and paddlefish researchers and managers to get together and discuss new and emerging work geared toward sturgeon and paddlefish restoration and sustainable management. Please submit your abstract (maximum 250 words) to Ryan Koenigs (ryan.koenigs@wisconsin.gov).

Workshops: A reminder that if you are interested in participating in one of the workshops on Monday October 19th please register soon so we can confirm numbers and space. There will be three workshops at the meeting. Workshop 1: Using Genetics to Improve Sturgeon Management and Conservation, Workshop 2: Sturgeon and Paddlefish Age Estimation and Tagging Workshop, Workshop 3: Techniques to Determine Sex and Stage of Maturity in Sturgeons and Paddlefish.

Student Travel Award: Two travel awards (one M.S. and one Ph.D.) for \$250 each will be provided to graduate students from Canada and the U.S. who are giving a poster or oral presentation. Applicants must be currently enrolled as a student in Canada or the U.S. and must be student members of NASPS.

Donation for Funding Raising Raffle: We are requesting donations for our funding raising raffle at our annual meeting. The NASPS activities are currently supported solely by membership fees. The proceeds from the raffle will be used to fund a student travel award to our annual meeting and continuation of the NASPS newsletter. With your donation, please include your name and/or business card so that we may properly acknowledge your generosity. Any donation would be greatly appreciated. Should you have any questions regarding this request, please contact Cam Barth (Canada; 204-794-6521) or Zach Snobl (USA; 715-829-0979).

Additional information pertaining to the annual meeting and student travel award can be found on our website: <http://www.nasps-sturgeon.org/conferences/north-american-conference-announcements.aspx>

NASPS Member Publications

We would like to spotlight sturgeon and paddlefish publications written by our NASPS members. Please send your recent publications to James Crossman (James.Crossman@bchydro.com) for inclusion in our NASPS newsletter. We will also ensure that your publications are spotlighted on our NASPS website. Please include the full citation, the abstract, and any applicable information.

For NASPS Announcements

If you have a photo, job announcement, or any other society related information for our webpage, please contact Molly Webb at Molly_Webb@fws.gov. To post announcements or news about sturgeon and paddlefish on our Facebook page, please contact Zach Snobl at Zachary.Snobl@wisconsin.gov. To tweet sturgeon and paddlefish news, please contact Emily Miller at eamiller@ucdavis.edu.

Join WSCS

You can join the World Sturgeon Conservation Society (WSCS), our parent society, at <http://www.wscs.info/about/join-us.aspx>. Joining the WSCS allows you a reduction in WSCS membership fees, the ability to purchase WSCS publications in bulk (> 10) at the membership discount, and WSCS membership registration rates for the International Symposium on Sturgeon meetings. Also, similar to NASPS, you have the ability to create a professional profile on the WSCS's website and conduct queries to seek specific international expertise on a wide range of sturgeon related questions. Join today!

NASPS Governing Board

Executive Committee	Members At Large
President: Molly Webb (U.S. Fish and Wildlife Service)	Peter Allen (Mississippi State University)
Past President: Ron Bruch (Retired Wisconsin DNR)	Nancy Auer (Michigan Technological University)
Vice President: James Crossman (BC Hydro)	Stephania Bolden (NOAA Fisheries)
Treasurer: Andrea Schreier (University of California, Davis)	Dewayne Fox (Delaware State University)
Secretary: Larry Hildebrand (Golder Associates)	Ryan Koenigs (Wisconsin DNR)
	Mike Parsley (Retired USGS)

Species Spotlight



Pallid sturgeon *Scaphirhynchus albus* is one of three sturgeon species within the genus *Scaphirhynchus*. Pallid sturgeon are widely distributed throughout the Missouri and Mississippi river basins, and they are rheophilic and potamodorous. The species was listed as a federally endangered species under the ESA in 1990 due to habitat alteration/fragmentation, illegal harvest, hybridization, and changes in water quality/quantity.

Pallid sturgeon have historically spawned in the Missouri, Mississippi, and Yellowstone Rivers. The spawning periodicity of females appears to be 2-3 years as determined by recaptured wild females with the majority of females having a 2-year cycle. The spawning periodicity of male pallid sturgeon appears to be 1-3 years. Hatchery-reared male and female pallid sturgeon released in the lower Missouri River were first documented in spawning condition at 9-14 years of age. In the upper Missouri River, hatchery-reared pallid sturgeon reached sexual maturity at 10 and 18 years for males and females, respectively, while captive fish reached sexual maturity at 4 and 9 years of age for males and females, respectively.

Little is known about the feeding habits of pallid sturgeon. In a hatchery environment, exogenously feeding fry will feed on brine shrimp suggesting that zooplankton and/or small invertebrates may be important prey during the early life stages. Pallid sturgeon exhibit an ontogenetic diet shift towards piscivory as body size increases.

If you have questions or would like more information on Pallid Sturgeon, please feel free to check out the member profile section of the NASPS website to find researchers working with Pallid Sturgeon.

Sturgeon and Paddlefish in the News

Atlantic Sturgeon

The Canadian federal government is holding formal public consultation to consider listing Atlantic sturgeon as a 'threatened' species under the Species At Risk Act (SARA). The listing would provide the species additional protection but would end a commercial fishery in New Brunswick that dates back to the 1880s. The story can be found at: <http://www.cbc.ca/news/canada/new-brunswick/atlantic-sturgeon-may-be-listed-as-threatened-species-1.2871325>

“The fight to save one of the world’s oldest fish species”. The article covers the population status of Atlantic Sturgeon focusing on conservation measures and includes quotes from NASPS member Dr. Dewayne Fox, Delaware State University. The story can be found at: <http://www.theguardian.com/environment/2015/feb/12/the-fight-to-save-one-of-the-worlds-oldest-fish-species>

Paddlefish

An article published in Outdoor Life Magazine discusses the harvest of paddlefish caviar in a snagging fishery, involvement by state biologists in Oklahoma, and the pros and cons of the fishery at Oklahoma’s Grand Lake. The article “The Egg Takers: Harvesting America's Paddlefish Caviar” can be found at: <http://www.outdoorlife.com/articles/fishing/2015/03/egg-takers-harvesting-americas-paddlefish-caviar>

Another article on the snagging fishery for paddlefish on the James River, Missouri discusses that Paddlefish stage in certain locations and are targeted for harvest by snagging with stout fishing rods, heavy line and large treble hooks. The article “Rain, muddy water stirs up big paddlefish on James River” can be found online at: <http://www.news-leader.com/story/sports/outdoors/2015/03/18/rain-muddy-water-stirs-big-paddlefish-james-river/24965967/>

Lake Sturgeon

A recent article entitled “Sturgeon and the Spear” covered the sturgeon spear fishery for lake sturgeon on Lake Winnebago in Wisconsin, and includes quotes from NASPS member Ryan Koenigs, Wisconsin Department of Natural Resources. The article can be found online at the New York Times:

http://www.nytimes.com/2015/03/21/sports/gone-spearfishin.html?_r=0

A story has been written highlighting the last 40+ years of sturgeon biologists in Wisconsin. The article includes interviews with two NASPS members, Ryan Koenigs and Ron Bruch. It can be read online at:

<http://fox11online.com/2015/04/17/sturgeon-staff-offers-90-years-experience/>



Photo: Lake Sturgeon spawning aggregation from the Winnebago System, taken during the 2014 spawning run. Photo credit: David Herasimtschuk, Freshwaters Illustrated, www.freshwatersillustrated.org/

Feature Article

In the 2015 newsletter series, NASPS will focus on highlighting groups that undertake sturgeon and paddlefish recovery planning in North America. Many of these initiatives have been underway for decades and these groups have made tremendous strides in sturgeon recovery. NASPS feels it is important to highlight these groups given the significant amount of effort and dedication that occurs, often behind the scenes of more pertinent research results which appear in the primary literature. The first recovery team being highlighted is:

Upper Columbia River White Sturgeon Recovery Initiative Technical Working Group

James A. Crossman

BC Hydro, Environmental Risk Management, 601 18th Street, Castlegar, BC, V1N 2N1, Canada. Email james.crossman@bchydro.com

and

Larry R. Hildebrand.

Golder Associates Ltd., 201 Columbia Ave., Castlegar BC, V1N 1A8



Upper Columbia White Sturgeon Recovery Planning

White Sturgeon in the upper Columbia River have undergone persistent recruitment failure since approximately 1970, where very few fish have survived from early life stages through to the adult stage. “Upper Columbia” refers to reaches and reservoirs of the mainstem Columbia River between Grand Coulee Dam in Washington State, USA, and the river’s headwaters in Canada. The current population estimate for wild adults is 3,000 and early estimates suggested that, without intervention, the Upper Columbia White Sturgeon population would become functionally extinct by 2044. Accordingly, White Sturgeon in the Canadian section of the Upper Columbia were listed as “endangered” under the Canadian Species at Risk Act (SARA) in 2006. Although the population is not listed as endangered in the United States, agencies in both countries saw the need to undertake recovery efforts to address the critical status of these fish. As a result, the Upper Columbia White Sturgeon Recovery Initiative (UCWSRI) was established in 2000 to provide a coordinated transboundary approach to this issue.

Under the UCSWRI, a technical working group (TWG) was formed to undertake detailed planning and implementation for conservation and recovery activities relating to upper Columbia River White Sturgeon. The primary role of the TWG is to offer scientifically sound advice to government and non-government agencies as required for recovery. While ultimate accountability for management decisions rests with the responsible jurisdictions, the TWG cooperates with the regulatory agencies on important processes related to recovery (e.g. defining critical habitat under SARA). The TWG is comprised of individuals with technical expertise in relevant areas of sturgeon biology and fish culture, recovery of endangered species, genetics, hydraulic operation of Upper Columbia hydro facilities, and habitat remediation. Members are comprised from a balanced representation of interests from participating federal, provincial and state governments, First Nations, Tribes, industry and other stakeholders.

The TWG has been planning and implementing the research associated with recovery in the Upper Columbia since the start of the initiative in 2001. The UCSWRI recovery plan, first developed in 2002, provides broad recovery objectives covering both the Canadian and US portions of the recovery area. The recovery plan was updated in 2012 to incorporate the significant amount of work completed over the first decade of the recovery initiative. The TWG also has an operational plan, which identifies ongoing and planned activities in support of White Sturgeon recovery. The operational plan is periodically updated to reflect completion of specific activities, and to reflect new activities as information and knowledge is developed over time. In Canada, a national recovery strategy provides additional guidance for recovery of the population within Canada. The above-noted planning documents, in combination, are used to provide general objectives and direction for the TWG to operate.

UCWSRI Technical Working Group Responsibilities

- Assembling accurate baseline data and reviewing reasons for population declines;
- Defining the recovery goals and short, medium, and long-term objectives for white sturgeon recovery;
- Establishing criteria to evaluate the recovery plan and to define success;
- Designing technical strategies, measures, and supporting research programs to achieve recovery goals and objectives; and,
- Establishing priorities for recovery implementation based on technical criteria and input from the public.
- Establish sub-committees as required on specific subjects (e.g. genetics, contaminants, etc.)

As the mechanisms associated with recruitment failure in upper Columbia White Sturgeon are uncertain, the TWG has also facilitated workshops focused on the multiple competing hypotheses that could have resulted in recruitment failure. The result of the recruitment failure hypotheses review was a ranking of the top competing hypotheses regarding the mechanisms influencing recruitment failure, which include:

- I. Changes in flow patterns (magnitude and timing) and reduction in turbidity reduce the survival of early life stages.
- II. Diminished suitability and availability of habitat (primarily related to substrate conditions) near spawning areas has led to reduced survival of early life stages.
- III. Changes to fish community has resulted in increased predation on eggs, free embryos, larvae and juvenile sturgeon and significantly reduced survival.
- IV. Food of the appropriate type and size is not available at the right time and place to promote survival of young sturgeon.

Currently, ongoing monitoring and research is linked to specific recruitment failure hypotheses and this is tracked in the TWG's operational plan.

Recovery Measures

The decline of the Upper Columbia White Sturgeon began with recruitment failure in the 1960s and 1970s, which was not recognized until the early 1990s. Many of the actions outlined in the early recovery planning process were intended to slow or arrest this decline and have been implemented over the past decade. A conservation aquaculture program was developed and initiated in 2001 to prevent extirpation of the lower Columbia River White Sturgeon population while research and monitoring into recruitment failure was conducted. The conservation aquaculture program has been adaptive in nature and as information on the survival of hatchery released juveniles in the wild has been obtained, further refinements to culture methods and stocking strategies have been implemented.

As of 2015, over 140,000 age-0 juvenile White Sturgeon have been released into the upper Columbia River in both Canada and the US. The majority of these juveniles were produced from mature adults (broodstock), taken from the river and artificially spawned in the hatchery. One of the goals of the



A five year old hatchery origin juvenile White Sturgeon. Photo: Guy Martel, BC Hydro

conservation aquaculture program is to retain the genetic diversity of the existing wild adults and over the first 14 years of the program, 166 adults (75 females and 91 males) have contributed to supplemental progeny. In an attempt to further increase the contribution of wild adults, the program will now focus (2015 on) on producing juveniles for release that are reared from eggs and larvae collected in the wild. Genetic studies completed in the upper Columbia suggest that genetic diversity will be increased using this method relative to the broodstock program.

The conservation aquaculture program has been successful and has prevented extirpation of this population, and there are now numerous strong juvenile age classes in the population (Figure 1). The upper Columbia River is productive and growth of these hatchery origin juveniles has been > 10 cm/year in fork length for the first decade

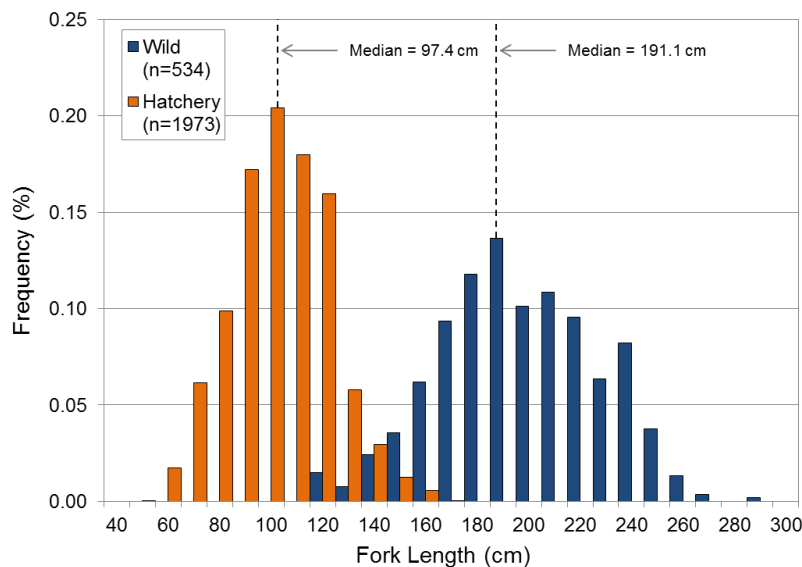


Figure 1. Length frequency of hatchery and wild origin White Sturgeon collected in upper Columbia River in 2014 (J.Crossman and A.Miller unpublished data).

following release, with no present indication of density-dependent reductions in growth rates. Based on recent survival estimates (Crossman and Hildebrand, unpublished), it is estimated that survival is a function of size at release with juveniles released at larger body sizes (200 grams) surviving better (86%) than those released at smaller body sizes (48% at 100 grams) in the first year following release.

Survival is then estimated to increase to 98% after two years of age, similar to estimates for wild adults. These survival estimates result in a current abundance estimate of 33,000 hatchery origin sturgeon in the upper Columbia River. This abundance has prompted a recent review of the long-term population targets and stocking targets.

Multiple measures will be required to achieve a naturally reproducing, self-sustaining population of White Sturgeon and to increase or restore opportunities for beneficial use, if and when feasible. The recovery measures and their associated research projects that will be the focus for the next 5-10 years are listed in Table 1. Although there is some uncertainty as to when and how natural recruitment will be achieved, the coordinated efforts of the UCWSRI since 2002 has substantially

increased overall knowledge of the species, protected wild adults, and increased the abundance of juvenile age classes which has prevented extirpation in the short-term. If you would like more information on the Upper Columbia White Sturgeon Recovery Initiative, please visit our website at www.uppercolumbiasturgeon.org.

Table 1. Recovery measures and associated research projects ongoing under the Upper Columbia Recovery Initiative.

Recovery Measure	Description
Adult Life Stage Monitoring	A five year systematic stock assessment is underway that encompasses the entire transboundary section of the upper Columbia River. The goal of this assessment is to estimate abundance and survival of wild adults that can be used as a baseline for recovery planning.
Monitoring Spawning Activity	Monitoring of White Sturgeon activity has been ongoing since the early 1990's. Currently, there are 6 known spawning locations and information on the timing, frequency, and numbers of adults reproducing is being monitored. Additional work is being conducted to define the habitat characteristics of each spawning area and identify unknown spawning sites based on movements of acoustically tagged adults.
Spawning Habitat Restoration	White sturgeon habitat in the transboundary section of the upper Columbia River has changed substantially due to industry impacts over the past several decades. Changes to substrates at spawning habitats are hypothesized to have contributed to recruitment failure. Feasibility assessments are underway to evaluate spawning habitat restoration at multiple locations, with one substrate enhancement project completed to date.
Conservation Aquaculture	Continuation of the program with a focus on the collection and hatchery rearing of wild origin eggs and larvae to augment genetic diversity of the supplemental progeny.
Juvenile Life Stage Monitoring	Annual monitoring of juvenile age classes to identify any wild recruitment that has occurred and to track survival and abundance of hatchery origin juveniles.
Early Life Stage Research	Research into mechanisms resulting in recruitment failure. Both field and lab based experiments are planned or underway

Heterocercal Tales



Photo: Ivan Donaldson with some White Sturgeon in the Bonneville Dam fish lock in 1950, from the collection of Mrs. Ivan Donaldson; taken by Les Ordeman.

The late Ivan J. Donaldson (1912-1989) was the resident fish biologist for the U.S. Army Corps of Engineers at Bonneville Dam from 1940 to 1973. He was a leading pioneer in White Sturgeon biology and recognized early on the importance of fish passage at dams constructed on the Columbia (Warren and Beckman, 1993). Because of Ivan's interest in White Sturgeon at Bonneville Dam, annual fish passage reports (1938-1969) contained detailed information about this species. Ivan was able to learn about basic biology by using fish locks to lift White Sturgeon over the dam and conducting his own studies. His work influenced the design, construction, operation, and management of fish passage facilities at Bonneville, The Dalles, and McNary Dams on the Columbia River. Ivan has some memorable quotes in his day including these from a letter to his Captain in September of 1942:

“Look ahead to the building of Umatilla and be willing to build a pair of locks for salmon and sturgeon. I suggest that they also be designed for bottom travelling fish

which do not like to rise over any wall. The design should be that sturgeon can enter from a level with the bottom of the deepest hole in the dam. I would like to think that we have demonstrated by cutting holes in the bottom stoplogs, which regulate the fish entranceway elevation to the ladder collection bays, that sturgeon will then enter the collection bays (some will anyway) and be lifted over the dam...We may find in the future that sturgeon must migrate to some extent”.

“Continue to operate the locks for sturgeon and learn all we can of this species so that tomorrow when the cry comes “Where have our sturgeon gone”, we can have the truth to tell”.

“Purchase a bicycle for use by the ichthyologist. If a biologist has any value at all he could quickly save the cost of a bicycle in the time it would save getting from one place to another”.

Warren, J.J., and L.G. Beckman. 1993. Fishway use by white sturgeon on the Columbia River. Washington Sea Grant Program, Seattle, Washington. WSG-AS 93-02. 12 pp. <http://nsgl.gso.uri.edu/washu/washug93002.pdf>

Call for Heterocercal Tales:

If you or someone you know has an interesting sturgeon or paddlefish tale, old or new, please send them to James Crossman (james.crossman@bchydro.com). While many of the heterocercal tales to date have covered older stories, we encourage all NASPS members to share their interesting photos and stories from the systems in which they work. Always remember, what may seem routine to you could be very interesting for those working on sturgeon or paddlefish elsewhere in North America. Requirements for submitting a heterocercal tale are simple, you must submit a brief account of the story (1 page max is ideal) and a photo that includes a sturgeon or paddlefish. Please note, NASPS will need permission to reproduce photos so please only submit photos with the consent of the photographer that captured it.

NASPS Student Subunit

The North American Sturgeon and Paddlefish Society (NASPS) recently surveyed students working in fields related to sturgeon research to seek feedback on the potential creation of a Student Subunit. A student subunit within NASPS would allow for students to voice their opinion at the executive committee level, while encouraging the continuing education and advancement of its members. Since the creation of NASPS is relatively recent (2012), student involvement has been minimal. However, NASPS recognizes the importance of student participation and has increased interest in having students play a larger role in the future trajectory of the society.

Results from the survey were compiled for a total of 29 respondents working in Canada (21% of respondents) and the United States (79%), for which only 31% of them were current members of NASPS and 35% were unaware of the existence of the society. The majority of respondents were pursuing their master's degree (62%) and had between 0 and 5 years experience (76%) working with these amazing fish. Atlantic (35%) and Lake Sturgeon (41%) were the two species who were the most studied, while the majority of students worked on projects that involved freshwater systems (72%). Very few of the students have presented their research at past NASPS conferences (76%), but the majority would consider doing so in the future (76%).

A large majority of the students (97%) surveyed were in favor of the creation of a student subunit and proposed this type of organization provide some of the following benefits:

- Workshops
- Socials
- Journal access
- Discounts on membership and meeting registration
- Travel awards
- Mentoring
- Opportunity to meet other students

In the past, a student travel award was established by NASPS and will continue to be managed by Dr. Peter Allen. A Student-Mentor Social will be held at the upcoming annual meeting in Oshkosh, WI October 19-22. Please see our registration page for more information about the Student-Mentor Social <http://nasps-sturgeon.org/conferences/north-american-conference-announcements.aspx>.

Furthermore, the students were asked about potential roles to be served by the student subunit and respondents suggested:

- Outreach and education
- Presence on the governing board
- Collaborative projects amongst student members
- Workshops that focus on the needs of students
- Networking events with other students and sturgeon professionals
- Retaining/Recruiting of current and future members
- Student exchanges/Job shadow
- Newsletter section
- Email list

In the light of the positive feedback provided by the students, the student subunit will be developed in the months leading up to the 2015 NASPS annual meeting in Oshkosh in October. The first step will be forming a foundational committee to facilitate the petition process that will have to be approved by the current NASPS governing board. The foundational committee will also be in charge of creating the subunit's constitution and by-laws and coordinating the first election that will be held during the annual meeting. NASPS will seek member feedback on the creation of the subunit over the coming months. In the meantime, feedback and interest about this process can be forwarded to the Student Subunit Committee Chair, David Deslauriers (david.deslauriers@sdstate.edu).

Publication Updates

The following are a few recent sturgeon and paddlefish publications. Please note that authors highlighted in bold are NASPS members. Have your next sturgeon or paddlefish paper highlighted in the NASPS newsletter and on the NASPS website by sending your publication details to James Crossman (james.crossman@bchydro.com).

Journal of Aquaculture

Gille, D. A., T. R. Famula, B. P. May, and **A. D. Schreier**. 2015. Evidence for a maternal origin of spontaneous autopolyploidy in cultured white sturgeon (*Acipenser transmontanus*). *Aquaculture* 435: 467–474.

Fisheries

Guy, C.S., H.B. Treanor, **K.M. Kappenman**, E.A. Scholl, J.E. Ilgen, and **M.A.H. Webb**. 2015. Broadening the Regulated-River Management Paradigm: A Case Study of the Forgotten Dead Zone Hindering Pallid Sturgeon Recovery. *Fisheries* 40: 6-14.

Transactions of the American Fisheries Society

Smith, J.A, H.J. Flowers, and J.E. Hightower. 2015. Fall Spawning of Atlantic Sturgeon in the Roanoke River, North Carolina. *Transactions of the American Fisheries Society*. 144: 48-54.

North American Journal of Fisheries Management

Wirgin, I., **M.W. Breece**, **D.A. Fox**, L. Maceda, K.W. Wark, T. King. 2015. Origin of Atlantic Sturgeon Collected off the Delaware Coast during Spring Months. *North American Journal of Fisheries Management*. 35: 20-30