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LETTER FROM PRESIDENT TOM KEEGAN

Dear AIFRB Members,

We are now at the midway point in my term as president, which means that it is time to solicit nominations to elect the next president. Someone recently asked me what qualifications I think are important for our next leader. My first reaction was to say that the successful candidate would have passion for the Institute, staying true to its past and focusing on the future. Upon further reflection, I built by various immigrant groups from around the world – and how the strength of the industry is in its diversity, both in terms of species and in industry work force. The same *should* be true for the makeup of our Institute officers. However, we have only had one female president (Linda Jones: 2005-2007) and I am the first President from the private sector.

According to the Bylaws of the Institute, it is the responsibility of the sitting president to solicit new nominees. I have previously asked for feedback on what direction you would like the Institute to take. Now I would like to ask that you contact me (Thomas.keegan@aecom.com) with potential presidential nominations. Please keep in mind that, as well as being a diverse leader, the candidate should be passionate about the Institute, work closely with our young professionals representative, and be active in social media.

Please keep in mind… the next president should work closely with our young professionals and be active in social media.

We have accomplished quite a bit in the last year and a half, but there is so much more to be done. Our membership continues to grow, thanks to the continued efforts of our current BOC members, especially our district directors and our membership chair. We have added a reorganized district in the Pacific Northwest and have elected new district directors, and we continue to search for those candidates who are interested in working with us to develop new, active districts. We also need to continue identifying new potential directors for existing districts. Please contact me with any input on these issues as well.

We are making progress with our budgetary issues, yet we continue to struggle to make ends meet. We need your support so we can fund our activities and award program. Please ensure that dues are current. And please submit your current email address to our treasurer or membership chair, which is critical for our transition to digital *Briefs*.

Finally, I heard your requests at last year's BOC meeting concerning the website, and have worked hard with the powers that be to ensure we have a site that focuses on membership news and member research. You'll find our mission statement at the top of the main page, fresh content that is available for members only, a district map, a new look, and much more. Please talk with your district director and district membership to let us know of any news updates that we can share with the rest of the Institute. (Please contact me for district or membership news – or suggestions for the new site.)

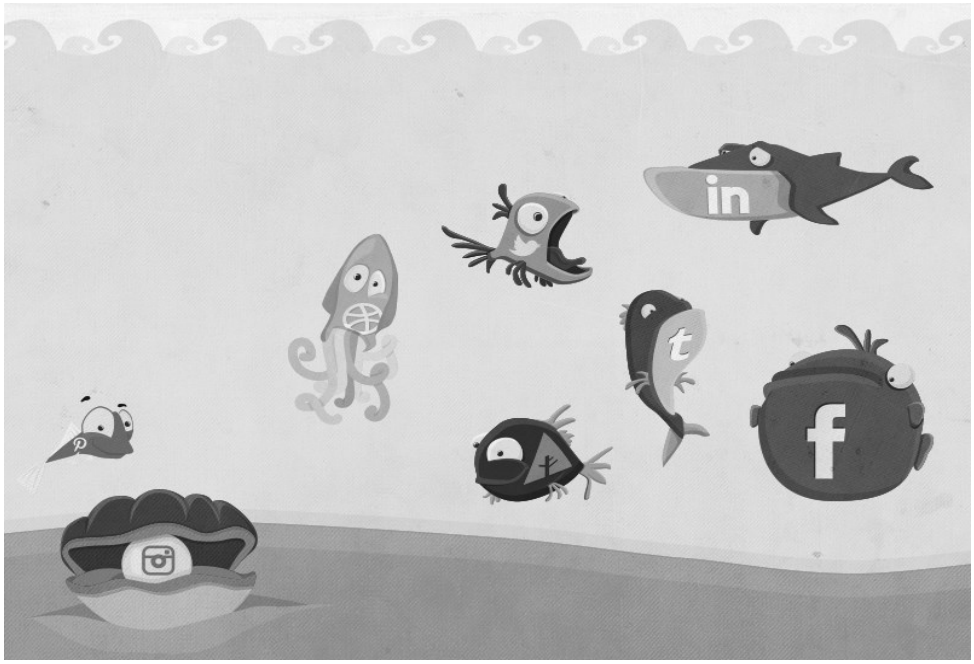
Sincerely,

Tom Keegan, President

+ Make a Difference!

Your work matters to the Institute

- **Become a mentor – our young professionals need you**
- **Donate! Pay it forward.**



SYMPOSIUM

Coming August 2016 In Kansas City

Fisheries Science in 140 Characters: the Role of Social Media in Our Science

Social media is not a new phenomenon. Many organizations have embraced it as a way of communicating with new audiences, making connections, and building partnerships. But what impact does it have on science, particularly fisheries science? In many ways, social media has transformed the way we disseminate our science, making it more transparent and open. Social media allows for a rapid exchange of information, but lacks the rigors of peer review, which may lead to miscategorization of information. When used efficiently, it can be a powerful tool for engaging stakeholders. It can also be a dangerous tool, as highlighted by the recent debate over the ethical ramifications of live-tweeting at conferences. This symposium will explore several aspects of utilizing social media within fisheries science. Topics will include communicating science to lay audiences, the role of social media in the publishing arena, using social media to verify (or deny) rare fishery events and enforcement, and understanding the impact of your digital footprint.

If you are interested in contributing to the symposium please contact: Sean.Lucey@NOAA.gov

Sean Lucey
AIFRB–AFS Liaison

JOIN: CO-ORGANIZING A PRIMITIVE FISHES SYMPOSIUM

One of the program co-chairs for this year's AFS meeting reached out to me to see if any of our members might be interested in co-organizing a primitive fishes symposium. Dr. Alexei M. Orlov with the Russian Federal Research Institute of Fisheries and Oceanography (VNIRO) is looking for a US based person to help him organize. Attached is his proposal. If you are interested, please contact *Sean.Lucey@NOAA.gov* or the AFS co-chair (Abigail Archer – *aarcher@barnstablecounty.org*).

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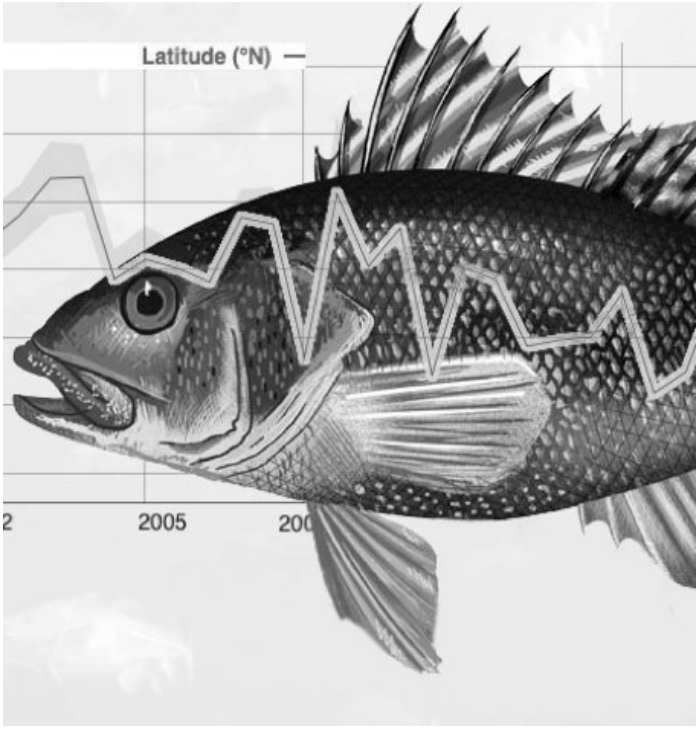
Awards Reminder



NOMINATION DEADLINES APPROACHING

W.F. Thompson Award for Best Student Paper (published in 2014)

Recognizes excellence in research, and encourages student professionalism in fisheries and aquatic sciences and publication of research results.
Nominations due: May 1

Contact:
Dr. Frank M. Panek
Fishery and Aquatic Health Associates
P.O. Box 379
Inwood, WV 25428

Email: fpanek@aol.com

Clark Hubb Student Research Award

Supports travel expenses associated with presenting results of an original research paper or research project of merit at scientific meetings or to conduct research at distant study sites.
Nominations due: June 15

Contact: Jerry Ault
Email: jault@rsmas.miami.edu

Outstanding Achievement Award: Individual
Outstanding Achievement Award: Group

Both awards go to those individuals and groups who/that made significant contributions to the advancement of fishery science.
Nominations due: June 1

Contact:
Dr. R. Beamish
Pacific Biological Station
3190 Hammond bay Road
Nanaimo B.C. V9T 6N7 Canada

Richard.Beamish@dfo-mpo.gc.ca

Kasahara Early Career Award

Intended to recognize the Institute's most promising young associates and members early in their research careers.

Contact: Steve Cadrin
Email: scadrin@umassd.edu

5 Things to Know About Alexander Tasoff

He Researches Genetic Capacity of fish populations to Adapt to Ocean Adification

1. He researches the genetic capacity of fish populations to adapt to ocean acidification, to understand how harvested species respond to changes in ocean chemistry, which will allow scientists and managers to anticipate population-level dynamics under predicted ocean acidification patterns.

2. He is a member of Americorps, where he has supported the State Water Resources Control Board with fishery restoration agendas; measured the water chemistry of fish-bearing streams with environmental monitoring equipment; gathered data on salmonid populations and built a GIS database, which has the agency to make informed decisions about watershed management.

3. His CSULB research included investigating the effects of ocean acidification on harvested marine fishes.

4. He was a research intern at Monterey Bay Aquarium, where he surveyed sea otter populations in California via field-techniques, including radio-telemetry and GPS tracking, and analyzed data on sea otter demographics and monitored otter foraging behavior within marine protected areas.

5. At UC Davis, he analyzed how algal blooms affected coastal sea-grass communities; primed seafloor sediment samples to measure the organic material deposited on benthic habitats; performed data entry to organize faunal species counts on sea-grass beds throughout the year; and investigated the immigration of exotic species into California coastal ecosystems, using Image J to enumerate the area taken up by exotic species within experimental plots, helping to advance the knowledge on invasive fauna demographics in marine-fouling communities.

AIFRB MEMBER SPOTLIGHTS

"One of the most alarming environmental events affecting marine species today is ocean acidification. However, it remains unclear whether marine fishes can develop greater tolerance to this phenomenon. For my thesis research, I am investigating the genetic capacity of coastal fish populations to adapt to declines in ocean pH."
Alex Tasoff

5 Things to Know About
Caitlin McGarigal

She Researches Paralabrax clathrates and Paralabrax nebulize Genetic Capacity of fish populations to Adapt to Ocean Adification

1. She is a graduate student at the CSULB SharkLab.
2. She began her fisheries career in high school by volunteering at a fisheries lab in Massachusetts.
3. She was a Hutton Scholar.
4. She studies how the stress of catch-and-release fishing affects fish physiology and behavior.
5. She focuses her research on two important game fish species in southern California: Kelp Bass, *Paralabrax clathrates* and Barred Sand Bass, *Paralabrax nebulize*.

For updates on Caitlin's research, follow her on Twitter@CMcgarigal.

5 Things to Know About
Connor White

He Puts Little Backpacks on Leopard Sharks

1. He is a graduate student at the CSULB Shark Lab.
2. He is studying the influence of environmental variables on the movements and behavior of Leopard Sharks, *Triakis semifasciata*.
3. He puts little backpacks (accelerometers) on Leopard Sharks to measure their body movements in order to understand their total energetic expenditure (think FitBit for sharks).
4. Before the Shark Lab, he was a fishery observer on commercial fishing boats in Alaska and did research at the Mote Marine Lab in Florida.
5. He joined AFIRB because their meetings provide opportunities to hear interesting talks, speak with local fisheries biologists about their work/research, and hear feedback from fisheries biologists regarding one's own research.

For updates on Conner's research, follow him on Twitter @ConnorFWhite.

AIFRB FOUNDING FELLOW
Donald L. McKernan

Donald L. McKernan was born in Eugene, Oregon, on January 29, 1918. He graduated in 1940 from the University of Washington with a B.S. degree in fisheries.

He worked as a laboratory assistant for the U.S. Bureau of Fisheries from 1938 to 1941 and as a research biologist for the Washington Department of Fisheries from 1941 to 1945. In 1945, while still in his 20s, he was named Director of Research for the Oregon Fish Commission. In 1952, he left that position to become Assistant Director, under Dr. O.E. Sette, another future Founding Fellow of the AIFRB, of the Pacific Ocean Fisheries Investigations of the U.S. Fish and Wildlife Service (FWS) in Honolulu, Hawaii. In 1955, he left Hawaii to become Administrator of Commercial Fisheries in Alaska for the U.S. FWS. In this post, prior to Alaskan statehood, he was in charge of research and management for all Alaskan fisheries. Notably, he moved the headquarters of the Alaska research and management personnel from Seattle to Auke Bay, Alaska. From 1957 to 1966, he was the first Director of the newly-created U.S. Bureau of Commercial Fisheries (BCF). In 1966, Mr. McKernan left the BCF to serve as Special Assistant for Fisheries and Wildlife to the Secretary of State. Given the personal rank of Ambassador, Mr. McKernan supervised all activities of the United States concerned with international aspects of fisheries and wildlife, whether bilateral, multilateral, or in the United Nations system. He left that position in 1974 to become the first Director of the Institute for Marine Studies (now the School of Marine Affairs) at the University of Washington, and he remained in that position for the rest of his life.

Mr. McKernan accepted temporary assignments during his professional career. In 1950, for example, he was a fishery specialist on the staff of the Supreme Command of the Allied Powers (SCAP) in Tokyo, where he was concerned with stimulating the development of post-war fisheries in Japan. In the spring quarter of 1951, he taught two courses at the University of Washington. He was a member of the American Association for the Advancement of Science, the American Fisheries Society, the American Society of Limnology and Oceanography, and a Founding Fellow of the American Institute of Fishery Research Biologists.

Mr. McKernan died in May 1979, at the age of 61. He was highly intelligent, and seemingly possessed unlimited energy. Unlike some people with those attributes, however, he was a kind and considerate person who would go out of his way to help anyone who was in legitimate need of help. It is regrettable that he did not live longer.

The Founding Fellows History was written and compiled by William H. Bayliff, wbayliff@iattc.org

BE A FISHERIES LEGEND
-
MAKE A DIFFERENCE FOREVER

Legacy Giving – Estate Donations

Please consider including the American Institute of Fishery Research Biologists in your will or living trust – you can help change the world of fisheries research forever

Planned gifts are enduring gifts. They can endow fisheries research projects, grant and scholarship awards for students, or provide crucial funds for unanticipated initiatives. Your memory, your research, your legacy can be celebrated with a gift from you. Your gift can help ensure that excellent fisheries biological research continues – and in your name!

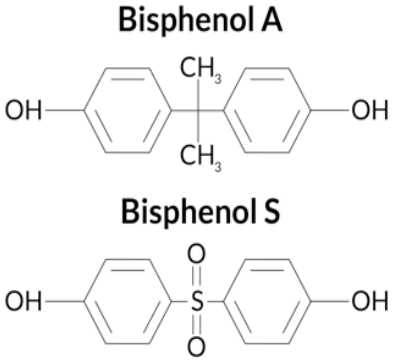
A gift in your will – of specified amounts of cash, securities, life insurance, real estate, or other property – are always a welcome and much-needed gift to AIFRB, and may also enable you to retain current assets and save on estate taxes later. Gifts of real estate may provide you with substantial income and capital gains tax benefits.

Contact Us
If you are considering including the American Institute of Fishery Research Biologists in your estate plans, or would like more information, please contact Allen Shimada: amshimada@gmail.com

Your Donations Help Change the World of Fisheries Biological Research

Consider a Tax-Deductible Donation to the AIFRB (EIN 61-6050711): Your support of AIFRB will greatly increase our ability to develop and maintain active scholarship and award programs.

Your donation to the Institute is tax-deductible to the extent allowed by law for donations to 501(c)(3) organizations. As you plan your Charitable Donations this year, please consider a donation to the AIFRB to help build our scholarship and award funds.



ZEBRAFISH HELP SHOW HOW 'BPA-FREE' IS MISLEADING

By Dana Sackett, Ph.D. – from The Fisheries Blog

The Fisheries Blog (*thefisheriesblog.com*) is produced by a group of five fisheries scientists (who also happen to be AIFRB members!). They write popular articles, paper reviews, and other short fisheries-related content.

Zebrafish are small freshwater fish that originated in rivers from India. These fish share important biological properties with all vertebrates that make them useful in understanding how contaminants may impact other vertebrates in the environment, including ourselves. Logistically they are also useful because they are easy to maintain in aquariums, and they have external fertilization and transparent embryos, making all stages of development easy to measure. In fact, zebrafish were recently instrumental in several studies demonstrating that 'BPA-free' products may not be any safer than products with BPA (aka bisphenol A).

BPA's are found in plastics (water bottles, tableware), the inside lining of cans, food packaging, receipts, and many more everyday products. With more and more evidence showing the harmful effects of BPA to wildlife and human health, industries began to search for alternatives to BPA to use in their products. In fact, the FDA banned the use of BPA in all baby bottles, sippy cups, and infant formula packaging because manufactures dropped BPA for 'safer' alternatives in 2012. Indeed, many of the products labeled 'BPA-free' replaced BPA with the alternatives bisphenol S (BPS) or bisphenol F (BPF). However, these alternatives have recently come under scrutiny.

BPS and BPF have similar properties to BPA, which is why they are so useful as replacements. However, it turns out they seem to have the same toxic effects and potency as well. Studies using zebrafish showed that BPS caused impaired reproduction and growth, lower testosterone, lower sperm counts, lower egg production, smaller gonads, higher estrogen levels, lower and slower hatching rates, higher embryo malformations, affects on the thyroid hormone system, which impacts brain development during gestation, and more.

In fact, a recent article compiled several studies on BPS and BPF to review what all those studies found. They showed that in zebrafish, rats and human cells, BPS and BPF had similar hormonal effects. Even more, this study directly compared BPA with these replacements and found that their effects and potency were very similar to BPA, calling into question the safety of 'BPA-free' products.

It seems that 'BPA-free' can no longer be called 'non-toxic' or 'worry free' as the labels here would suggest. Source: http://loe.org/shows/segments.html?programID=14-P13-00011&segmentID=4

Our environment is awash in chemicals that we produce. It seems that we need to do a better job of distinguishing harmful contaminants before they make-it into our everyday products and ecosystems. For now the best way to avoid exposure to these particular chemicals and keep them out of our environment is to avoid plastic as much as possible (drink out of glass or stainless steel containers, do not microwave food in plastic containers, avoid single-use plastic products) and to avoid handling receipts.

Written by Dana Sackett

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• http://www.cnn.com/2016/02/01/health/bpa-free-alternatives-may-not-be-safe/
• http://time.com/3742871/bpa-free-health/

Current Research of Member – John S.S. Denton
Department of Vertebrate Paleontology
American Museum of Natural History, NYC 10024

I work on the evolution and diversification of myctophiform fishes (lanternfishes and blackchins). Myctophiform fishes are midwater (mesopelagic) fishes that are circumglobally distributed in the world's oceans. These fishes are bioluminescent (light-emitting) and also extremely abundant, comprising over half of all deep-sea biomass and contributing to the worldwide deep scattering layer (i.e. the "false-bottom" reading produced when sonar bounces off swimbladders). The abundance of lanternfishes, especially, has led some to identify these fishes as an underexploited resource for human use as, for example, crude protein for fishmeal and cosmetic wax. However, lanternfishes occupy an intermediate trophic position in many marine food webs—consuming zooplankton, while being consumed by more familiar creatures like dolphins and King penguin. Targeting lanternfishes for human use may therefore destabilize food webs that rely on these ubiquitous fishes, and thus have unanticipated and lasting consequences for the marine environment.

But what do we know at this point about lanternfish and myctophiform biology that might guide our way forward?

The answer, as for many midwater organisms is, on average, not much. However, the need for data on myctophiform fishes is especially enhanced by the looming prospect of their use as a resource.

To provide this data, I take a multidisciplinary approach to understanding myctophiform evolution, working at the interface of molecular phylogenetics, geometric morphometrics, CT scanning, and macroevolutionary methods development.

So far, I have generated the most complete multilocus molecular phylogeny of these fishes to date (Denton, J.S.S. 2014. *Molecular Phylogenetics and Evolution*), with over 50% of the nominal species. This study has not only contributed significantly to our understanding of how these fishes are related to one another, but also provided an evolutionary hypothesis amenable to modern statistical macroevolutionary techniques, which often require large numbers of species. I have also collaborated on statistical methods aimed at analyzing the role that certain bioluminescent structures (photophores) might play in midwater diversification processes, relative to other life-history factors like the timing of larval development (Denton, J.S.S. and Adams, D.C. 2015. *Evolution*).
– *www.johnssdenton.com*

Welcome and Congratulations to ALL!! MEMBERS

New Memberships

- Scott Bonar – Fellow
- Joelle Blais – Student Associate
- Connor Capizzano – Student Associate
- Chris L. Chabot – Member
- Patrick Cooney – Member
- Tobey H. Curtis – Member
- Andrew H. Fayram – Member
- Walter J. Golet – Member
- Jan-Michael Hessenauer – Member
- Homam Jamal – Student Associate
- Darren W. Johnson – Member
- Amberle K. Jones – Member
- Jarrad Kosa – Member
- Earnest Alan McCune III – Member
- Joshua G. Murauskas – Member
- Velvet L. Park – Student Associate
- Theodore W. Pietsch – Fellow Emeritus
- Norm Ponferrada – Member
- Dana K. Sackett – Member
- Brittany D. Schwartzkopf – Student Associate
- Rebecca L. Shuford – Member
- Alexander J. Tasoff – Student Associate
- Justin A. Willig – Professional Associate

Promotions

- Kimberly M. Walker – Professional Associate
- Earnest Alan McCune III – Member
- Nancy Drummond Davis – Fellow
- Dora Passino-Reader - Emeritus
- Raymond Morgan – Emeritus
- Malcolm Johnson – Emeritus

DISTRICT DIRECTORS

Alaska, Northern
Christian Zimmerman
USGS Alaska Science Center
4230 University Drive Suite 201
Anchorage, AK 99508
czimmerman@usgs.gov
•••

Alaska, Southeast
Jamal Moss
NOAA Alaska Fisheries Science Center
17109 Lean Loop Road
Juneau, AK 99801
jamal.moss@noaa.gov
•••

Arizona - New Mexico
Vacant
•••

British Columbia
Brittany Jenewein
Fisheries and Oceans Canada
#301-1918 McCallum Road
Abbotsford, British Columbia
btjenewein@gmai.com
•••

California, Northern
Thomas Keegan
Senior Fisheries Scientist
AECOM
2020 L Street, Suite 400
Sacramento, CA 95811
thomas.keegan@aecom.com
•••

California, Southern
Kim Anthony, Senior Marine Biologist
Southern California Edison
Corporate Environmental, Health & Safety
1218 South 5th Avenue, Monrovia, CA 91016
kim.anthony@sce.com
•••

Capital
Mark D. Chandler
NMFS Science & Technology
1315 East West Hwy
Silver Spring, MD 20910
mark.chandler@noaa.gov
•••

Carolinas
Vacant
•••

Florida
S Gregory Tolley, Ph.D.
Professor of Marine Science
Coastal Watershed Institute
Florida Gulf Coast University
10501 FGCU Blvd S
Fort Myers, Florida
gtolley@fgcu.edu
•••

Great Lakes, South Central
Vacant
•••

Gulf of Mexico, Northeast
Vacant
•••

Keystone
Joseph W. Rachlin
Dept. Biological Sciences
Lehman College of CUNY
250 Bedford Pk. Blvd. W.
Bronx, NY 10468-5189
joseph.rachlin@lehman.cuny.edu
•••

New England
Ben Galuardi
University of Massachusetts Dartmouth
School for Marine Science and Technology
706 Rodney French Blvd
New Bedford, MA 02744-1221
bgaluardi@umassd.edu
•••

Pacific Northwest Super District
(Washington, NW, Oregon – SW Washington)
David Hand
Supervisory Fish Biologist
Columbia River Fisheries Program Office
1211 SE Cardinal Court, Suite 100
Vancouver, WA 98683
david_hand@fws.gov
•••

Texas
Brad Erisman
University of Texas at Austin
Marine Science Institute - Port Aransas
750 Channel View Drive
Port Aransas, TX 78373
berisman@utexas.edu
•••

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American Institute of
Fishery Research Biologist

c/o CATE O'KEEFE
PO Box 251
Fairhaven, MA 02719

SYMPOSIUM

Coming
August 2016

In Kansas
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BE A FISHERIES LEGEND - MAKE A DIFFERENCE FOREVER

NOMINATIONS NEEDED

Nominations
requested for AIFRB
potential presidential
nominations