Website: www.aifrb.org

American Institute of Fishery Research Biologists

Promoting excellence in fishery science

. . . BRIEFS . . .

VOL. 43-1 SPRING 2014

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President's Message

In the last decade, the perception of climate change has developed from a warning to a reality. My back is still sore from shoveling the snowfall of the last storm, and the storms are now coming at a frequency of about two per week in the northeast US. Earlier this winter, I saw a snowy owl fly from its perch on the New Bedford hurricane barrier – a rare sight in southern New England. On the same day, a fisherman sent me pictures of a brown pelican sitting on his deck in waters off New Hampshire – that's about the northern extent of its range, but not in December. Apparently, climate change and ecosystem responses are much more complicated than the early expectations of 'global warming' and shifting distributions. These observations are signs of profound and complex changes to climate and marine ecosystems. We live in exciting times to be a fisheries biologist, because we're challenged to respond to the ecosystem changes around us and address these changes in our research and advice to fishery managers. One common approach to making predictions about fisheries is to assume that the resource will respond to fishing the way it has in the past. Our catch projections typically assume that the components of production (growth, mortality and recruitment) will be approximately what they have been recently or even throughout the history of the fishery. Those assumptions offered valuable information for management in previous decades. However, in the face of such profound ecosystem changes, we should now question that approach, particularly when our projections are failing to accurately predict resource responses to management actions. AIFRB has been active over the last several years, organizing symposia and conferences on fishing and the environment, and we should continue our promotion of research to understand how fishery resources respond to ecosystem changes and to develop new ways of reliably informing fishery managers on how best to achieve societal objectives from fishing. These are the research challenges that AIFRB was founded to confront. *Steve Cadrin, President*

Call For Papers

Sixth International Symposium on GIS/Spatial Analyses in Fishery and Aquatic Sciences

The meeting will be in Tampa, Florida, August 25-29, 2014, with co-organizer Dr Bob Swett (Florida Sea Grant and Fisheries and Aquatic Sciences Program, University of Florida). Deadline for the registration and submission of abstracts is May 30, 2014

Read more: www.aifrb.org > Announcements > Call for Papers

AIFRB Is Looking for New and Exciting Content

(blogs, articles, videos, and social media!)

How about starting a blog (by yourself or with a tag team)… or just learn how to blog? Need some digital publishing experience? Want to get to know the ins and outs of social media? Interested in getting published in *Briefs*? *Send an email to: sarahgilbertfox@gmail.com*

American Fisheries Society (AFS) Looking for Editors

- The American Fisheries Society (AFS) seeks a scientist with a broad perspective on fisheries to act as Co-Chief Science editor to work (with AIFRB board member, Jeff Schaeffer) as part of a two-person leadership team to oversee the science content of Fisheries. *Visit: http://fisheries.org/afs-seeks-co-chief-science-editor*
- AFS science editors who specialize in specific subjects. Interested? *Send email to: sgilbertfox@fisheries.org*
- AFS new content editors who want to be involved with filling Fisheries magazine and Fisheries.org with relevant and exciting, non-peer reviewed content. Interested? *Send email to: sgilbertfox@fisheries.org*

Clark Hubbs Student Research Awards

The Hubbs Associate Research Award was established in 1986 to support travel expenses associated with professional development. It is offered annually to AIFRB graduate students and other Associate members of the Institute in good standing. The award is granted to cover 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. The Award provides a maximum of $500.00; an individual may receive two awards in a lifetime.

Criteria for Evaluating Candidates: (1) Associate member in good standing; (2) original paper or project of scientific merit; (3) travel expenses not paid by study grants; and (4) not more than two RA awards received in a lifetime.

NOMINATIONS ARE DUE JUNE 15

Radiocarbon in the Environment Conference

Queen's University, Belfast, Northern Ireland
August 18-22, 2014

The meeting will cover istopic research including the utilisation of radiocarbon in the fields of ecoloty and environmental change. Radiocarbon and stable isotopes in Frshwater, Marine, Terrestrial and Atmosheric Environments with emphasis on Environmental Change, Techniques, and Statistical Methods.

For details visit: www.qub.ac.uk/sites/14C

WELCOME

Newest AIFRB Members

Shannon Bayse
Lee Benaka
Aaron M. Berger
Mary Blasius
Cynthia Bloom
Andrea Buchheister
Mark Chandler
Brian Clark
Alison Colotelo
Amy Comer
Guillaume Dauphin
Lance Dorsey
Shelley Edmundson
Elizabeth Fairchild
Kristy Forsgren
Cynthia Fox
Charlie Gagen
Benjamin Galuardi
Daniel Georgianna
Larry Gigliotti
Jon Goin
Christopher Gurshin
Nicolas Gutierrez
David Hand
Joseph Read Hendon
William Hoffman
Parker House
Natalie Jones
Lisa Kerr
Thor Lassen
Cynthia Ledoux-Bloom
Robert Leaf
Chunlong Liu
Michael Lowe
Molly Lutcavage
Patrick Lynch
Camilla McCandless
Steve Midway
Tancy Moore
Joel Nohner
Michael Pol
Lance Renoux
Kenneth Riley
Konstantine Rountos
Traci Sanderson
Dennis Scarnecchia
Kelsey Schlee
Adam Schroeder
Steve Slater
Michelle Staudinger
Molly Stevens
Andrea Stoneman
Emily Tozzi
Jesse Trushenski
Sara Turner
Michelle Walsh
Walter Via
Lynne Waterhouse
Douglas Zemeckis

Member Films

Wicked Tuna: Bluefin Experts: Molly Lutcavage

One of AIFRB's newest members, **Molly Lutcavage**, who is the director of the Large Pelagics Research Center, shares her thoughts on sustainable fishing of bluefin. "The bluefin is the rockstar of the sea, let's face it. It does everything better. It's one of the most beautiful animals out there. It's got the best submarine design of any fish I know of. Each bluefin is different when you see it alongside the boat. Its big black eye looking at you, you'll never forget it...I realize that fish has crossed the ocean hundreds if not thousands of times. That fish has traveled from the surface to the great depths, seen things I've never seen and has incredible knowledge…. it has evaded us and remained a great mystery. Despite its value of 50 years of scientists studying it, we still don't have sum of the most basic knowledge about what it is and where it goes."

***A National Geographic Film**:*
http://channel.nationalgeographic.com/channel/wicked-tuna/videos/bluefin-experts-molly-lutcavage

Video Excerpt: Cynthia Leadoux-Bloom
Fish Predation Studies—Striped Bass Migration

"Before we could actually look at habitat use at all, we had to map out salinity and temperature. And one of the things that has also been a little frustrating to me working here in the San Francisco Estuary is that everybody has their own definitions of how to define low salinity zone, what is an estuary, tidal influence, that sort of thing, so I was lucky enough to stumble across NOAA's new Coastal and Marine Ecological Classification Scheme, which they developed specifically for the San Francisco Estuary that uses these exact same break points, which are internationally accepted and peer reviewed, for the whole United States. And I think using this type of scheme when you're looking at introduced fish such as striped bass, it would be important to use these sorts of schemes and classification systems because they're used on the East Coast as well." *AIFRB member, Cynthia Leadoux-Bloom.*

To read more and access the video link:
www.aifrb.org > menu spotlight.

Templeton: A Fisherman's Son
Wilfred Templeton

Wilfred Templeton, known as Temp, was a scientist regarded as the leading pioneer of marine science in Newfoundland who also helped found the International Commission for the Northwest Atlantic Fisheries. "As much as Temp valued the work done in the laboratory he considered work at sea paramount. This is because he saw that if Newfoundland was to achieve its full potential as a fishing nation or unexplored offshore waters and the multitude of underutilized and, as yet, undiscovered marine species they contained, had to be thoroughly surveyed. This survey was also essential, because he could see that after the war the traditional salt cod fishery would become a thing of the past with the widespread introduction of domestic refrigeration. People would want fresh frozen products, not just cod, but other species as well. And Newfoundland fishermen, like his father, would have to be educated and equipped to go out where these species had been located and harvest them."

A film produced by AIFRB board member, Dick Beamish:
http://science.gc.ca/default.asp?lang=en&n=D9FBA653-1

In Blogs

Fishosophy

A blog by Steve Cadrin, John Everett, Ray Hilborn, Molly Lutcavage, Bonnie McCay, Brian Rothschild, Nils E. Stolpe, James Sulikowski, and Vidar Wespestad

So How's That "Catch Shares" Revolution Working Out For Groundfish?

By Nils Stolpe; Email: nilsstolpe@cfl.rr.com

The following does not necessarily represent the views of the other Fishosophy bloggers, the AIFRB, the AFS or the leadership of either organization.

"Recent scientific analyses show us that fisheries managed with catch share programs perform better than fisheries managed with traditional tools. Even in the first years after implementation, catch share fisheries are stable, and even increase their productivity. The scientific evidence is compelling that catch shares can also help restore the health of ecosystems and get fisheries on a path to profitability and sustainability. These results, … these scientific analyses, … are why moving forward to implement more catch share programs is a high priority for me. I see catch shares as the best way for many fisheries to both meet the Magnuson mandates and have healthy, profitable fisheries that are sustainable."

(Former NOAA Administrator Jane Lubchenco to the New England Fishery Management Council pressing for catch share management in the New England groundfish fishery in Boston on May 19, 2009)

Several weeks back NOAA/NMFS released the **2012 Final Report on the Performance of the Northeast Multispecies (Groundfish) Fishery (May 2012 – April 2013)**. The 121 page report is rather formidable, but fortunately for those of us who aren't interested in the minutia of sociology, anthropology and economics as applied to the situation that our nations' oldest and at one time most important commercial fishery has been forced into, its first table (*Summary of major trends (May through April, includes all vessels with a valid limited access multispecies permit*) says about all that needs to be said concerning the efficacy of federal fisheries management under what the Magnuson Act has been turned into by the mega-foundation supported ENGOs. It's also a fairly good indicator of Ms. Lubchenco's prowess as an analyst/prophetess/seer.

A copy of Table 1 is at www.fishnet-usa.com/Table_1.pdf. The total groundfish revenues for groundfish vessels from 2009 – the year that catch shares were first inflicted on the fishery – to 2012 were $82 million, $83 million, $90 million and $70 million respectively. In the third year of the New England groundfish catch shares program – called a "Sector Program" here – the stability that Ms. Lubchenco had assured everyone was just around the catch shares corner was as dead as a dodo because of a pronounced decrease in productivity

Considering the cumulative cuts that have been instituted in the groundfish fisheries it's safe to assume that the reported 2011 – 2012 trends will extend into the current fishing year, and without major changes in the Magnuson Act and in how NOAA/NMFS and the New England Council are allowed to manage the fisheries they will be extended beyond that.

So what, if anything, can be done?

First off, it's important to be clear on one point. That is, this debacle can't be blamed entirely on catch shares in general or the New England groundfish sector system in particular. In spite of Ms. Lubchenco's inaccurate pronouncements, catch shares are not a guaranteed fix for any ailing fishery. From the perspective of the fish a catch share system is nothing more than a quota system (though from the fishing industry perspective it can be significantly different, depending on who – or what – ends up owning or controlling the quota), and quota systems are only as good as the quota setting and quota enforcing mechanisms behind them.

Unfortunately the quota setting mechanism in the New England groundfish fishery has been grossly ineffective – and this is in large part a function of the science that has supported it (let me stress here that I'm blaming the science, not the scientists, whose science might be skewed by bureaucratic, institutional and budgetary considerations). According to the science, in recent years the groundfish come and the groundfish go – though currently they appear to be mostly going – with little connection to harvest levels.

Needless to say, when you have a fisheries management system which is predicated almost entirely on controlling fishing mortality, which our fisheries management system is, and there are other factors that impact fish stocks as much as or more than fishing mortality, your management system is going to break down, as it has in New England.

An obvious fix of this dismal situation would involve identifying and measuring these other factors and then adjusting our management systems to allow for them.

Can we do that? And why are we stuck with this system? Is there a solution?

Read the entire article: www.aifrb.org/2014/02/fishosophy

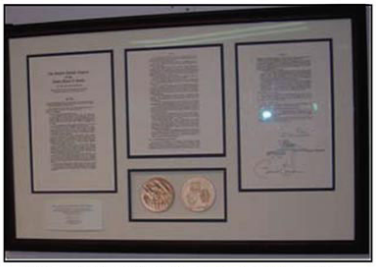
Announcements

Congressional Gold Medal

The Congressional Gold Medal was mounted on the NOAA Ship *Bell M. Shimada* (named after **Bell Shimada**, one of the first members of AIFRB). The 147th Congressional Gold Medal was awarded collectively to the Nisei Veterans of the 100th Infantry Battalion, 442nd Regimental Combat Team, and Military Intelligence Service United States Army.

Read more: www.aifrb.org > Announcements > Ceremonies

Bell M. Shimada



Mounted CGM and law in crew's mess

Announcing the Roelofs Humboldt Fisheries Fund

Dr. Terry Roelofs, Emeritus Professor of Fisheries Biology at Humboldt State University, has inspired and mentored numerous cohorts of fisheries students since his arrival at HSU in 1970. Terry has the rivers and streams of the North Coast running through his veins and has tirelessly shared his love of fisheries and sustainable fishing with his many students and colleagues. ***We are seeking donations to this fund***, which was originally established by The Humboldt Fishin' Lumberjacks, a group of HSU Fisheries Alumni that have met annually since 2002 to share quality fishing time together. The goal of the Fund is to provide scholarships for students pursuing an advanced degree in fisheries at HSU with a focus on fisheries conservation and enhancement research that applies to or is in North Coast watersheds and adjacent marine waters.

The fund is established with the Humboldt Area Foundation, and it's easy to contribute online or by check. **For more information on how to contribute, please go to http://www.hafoundation.org/donations/donations.php**. If you donate, please make sure to note your contribution is for the **ROELOFS HUMBOLDT FISHERIES FUND**. You may also contact Craig Heberer craig.heberer@noaa.gov 760-805-5984 or Chris Witt ChrisW@hafoundation.org 707-442-2993.

Your donation will assist students in the Fisheries Department at Humboldt State University, with the first annual scholarship to be awarded in 2015.

In Memoriam

Walter R. Courtenay, Jr

Walter R. Courtenay, Jr. —a devoted fish conservationist and educator—died January 30, 2014 at age 80. He was a fellow emeritus of the American Institute of Fishery Research Biologists, and received the American Fisheries Society Lifetime Achievement Award. He served as a faculty member at Duke University (1963-65), Boston University (1965-67), and Florida Atlantic University at Boca Raton (1967-1999) where he twice chaired the Department of Biological Sciences. At various times he also held research appointments with the U.S. Bureau of Commercial Fisheries, the Museum of Comparative Zoology (Harvard University), U.S. Fish and Wildlife Service, and Arizona State University. He served as consultant on introduced fishes for the Fishery Resources and Environment Division, Food and Agriculture Organization of the United Nations in Budapest and Rome in 1988, for the Foundation for Research Development, Council for Scientific and Industrial Research, Pretoria, South Africa in 1988, for South Australia Department of Fisheries, Adelaide, Australia in 1989, and for the Office of Technology Assessment, Congress of the United States. Walter was an ichthyologist and a leading authority on invasive nonindigenous fish, particularly those introduced into the United States. Among his numerous publications are Distribution, Biology, and Management of Exotic Fishes (1984), coedited with Jay Stauffer, and Snakeheads (Pisces, Channidae), a Biological Synopsis and Risk Assessment (2004), coauthored with James D. Williams. In his final years he held the position of Courtesy Curator for the Florida Museum of Natural History at Gainesville and Research Fishery Biologist with the U.S. Geological Survey, Biological Resources Division, at the Florida Integrated Science Center in Gainesville.

A longer version can be found here: www.aifrb.org > In Memoriam

Carlos de la Mesa Fetterolf, Jr., B.S., M.S.

Age 87, died Saturday, March 22, 2014 due to complications from a fall.

Carlos was born on Dec. 28, 1926 in Glen Ridge, New Jersey. After serving in World War II, he graduated from the University of Connecticut, where he enjoyed being on the All American Intercollegiate Soccer Team. He then went on to earn an M.S. from Michigan State University. He was an avid environmentalist; he used his education as an aquatic biologist to make his life work the protection of the Great Lakes.

Carlos was retired from the Canada-United States Great Lakes Fishery Commission where he served as Executive Secretary from 1975 to 1992. Prior to working with the Commission, Carlos was a fishery researcher and manager with the Tennessee Game and Fish Commission, the Chief of Water Quality Appraisal for the Michigan Department of Natural Resources, and the Michigan DNR's Chief Environmental Scientist. On leave to the U.S. National Academy of Sciences, he served as science coordinator in development of Water Quality Criteria, 1972, a resource document for the establishment of national water quality standards.

Fetterolf led the bi-national Great Lakes Fishery Commission during a time of enormous change in the Great Lakes basin, when water quality problems and fishery degradation threatened the future of the lakes. Ever the optimist, he promoted science, helped create the conditions necessary for large-scale fishery restoration, and facilitated negotiations over the 1981 Joint Strategic Plan for Management of Great Lakes Fisheries, a provincial, state, tribal, and federal agreement that thrives today and guides cross-border fishery management.

"Carlos Fetterolf was a passionate spokesman for the Great Lakes Fishery Commission and for the resource," said Commissioner William Taylor, a Distinguished Professor of Fisheries at Michigan State University. "He cared deeply about fish and the people who depend on them for food, recreation, subsistence, and income. As executive secretary, he understood the

momentum of the 1970s and 1980s toward Great Lakes recovery and used the commission's stature as a treaty-based institution to ensure the fishery would rebound in tandem with progress in other critical areas such as water quality and habitat improvements."

Taylor, who as chair of commission's research board worked closely with Fetterolf, added: "Carlos was a great believer in people and the power that science, coupled with human ingenuity and passion, could make in improving our fisheries in the Great Lakes. Fetterolf worked tirelessly to steer the commission and its resources toward building the capacity needed to connect the people to better understanding the Great Lakes fishery ecology and management. He was a keen observer and believed strongly in the value of employing science in our management decisions. Fetterolf heightened the commission's involvement in the International Association of Great Lakes Research, he championed a number of key commission-sponsored international symposia to build intra-basin and global collaboration, and he actively recruited young professionals to select the Great Lakes region as the place to do their research and conduct management."

Taylor concluded: "Carlos might best be remembered for his work to build strong, enduring, and effective collaboration among the provincial, state, tribal, and federal fishery agencies of the Great Lakes basin. Carlos spearheaded the commission's efforts to assist in the development of the 1981 Joint Strategic Plan for Management of Great Lakes Fisheries, a multi-jurisdictional agreement that helps fishery officials work together. After Native American Tribes had their fishery management rights re-affirmed, Carlos ensured that the tribes became members of the Joint Strategic Plan so they could sit at the management table with their provincial and state peers. The outstanding collaboration we have today with our basin fisheries and environmental management authorities enhances the effectiveness of our abilities to make a difference as a community and is a testament to Carlos' vision for the region."

Carlos, who was a long time member of AIFRB, was also a past president of the American Fisheries Society, the North American Benthological Society, the International Association for Great Lakes Research, and the Michigan Association of Conservation Ecologists. Carlos received awards for his career contributions to natural resources from the U.S. Fish and Wildlife Service, the Great Lakes Fishery Commission, the International Association for Great Lakes Research, and both of his alma maters. Carlos was recently inducted into the Fresh Water Fishing Hall of Fame. After retirement he was appointed to the U.S. National Sea Grant Review Panel, did contract work for the Commission, the World Bank in Kenya, and others.

His greatest pleasure after retirement was spending time with family and friends. He continued to share his vast knowledge and expertise by volunteering with environmental causes, such as Trout Unlimited. Carlos' enthusiasm for the outdoors was instilled in his family during treasured time together; whether it was snow skiing, water skiing, snorkeling, fishing, camping, canoeing, or hunting. Carlos' irrepressible zest for life and sense of humor was contagious! He made a difference; personally and professionally!

He was preceded in death by his cherished wife Norma Baughan Fetterolf. Carlos had four children: David (Maureen), Bruce (Judy), Trudy Eby, and Amy Corser (Eric). He leaves five grandchildren: Laura and Sara Fetterolf, Travis Fetterolf, Cory Eby, and Dante Jones. He is also survived by his beloved cousin, Mary Frances Bradley.

Memorial contributions may be made to the American Fisheries Society in Bethesda, MD (fisheries.org), Ann Arbor Area Trout Unlimited (annarbortu.org), or St. James' Episcopal Church in Dexter (stjamesdexter.org).

This write up is a compilation of his official obituary and the memoriam from the Great Lakes Fishery Commission: www.glfc.org/temp/Fetterolf_3-25-14.pdf

A Dash of Fetterolf Humor

Fetterolf Eschews Alces Eliminata

Dear AIFRB *Briefs* Readers,

While scanning the N/D '07 issue of *Briefs*, I noticed the headline "Huntsman Receives Distinguished Service Award." Curious as to what the Feesh Doctor could have done in a distinguished manner, I read on. I was shocked to find my culinary capabilities and (by reference) those of my campmates associated with Moose-Dropping Pie*.

In repudiating this repugnant inference, be advised there are no moose near the Fetterolf family cabin (The Remedy, it works every time) where the menfolk seek turkeys, steelhead, trout and morels. Amazingly, the invitees often request individual or team responsibility for a breakfast, hors d'oeuvre or dinner.

Sincerely,

Carlos Fetterolf

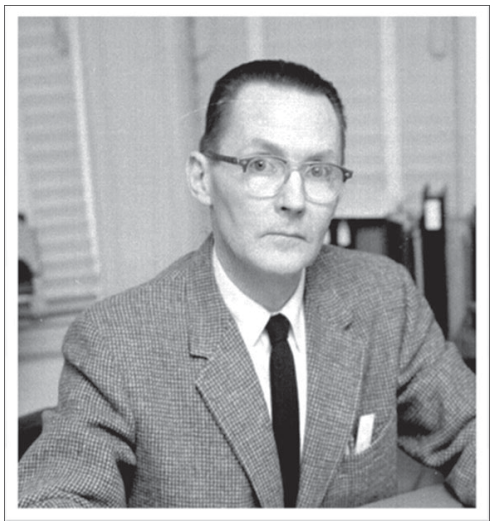
*Beaver, deer or rabbit droppings may be substituted.

(BRIEFS: Volume 7, No 2)

We Still Need Your Input!

AIFRB invited a young professional representative to their annual Board meeting in Little Rock, AR in September. Recognizing the importance of expanding membership to young professionals and students, the Executive Board announced the inclusion of a young professionals' representative to assist in understanding what young members expect and desire from AIFRB and to help determine how AIFRB can assist in promoting good science at the beginning of careers. Cate O'Keefe from the School for Marine Science and Technology (SMAST) at the University of Massachusetts was selected to represent young professionals at this year's meeting with the goal of starting these important discussions. Please weigh in on what you think is important for young professional AIFRB members by May 10, 2014.

www.surveymonkey.com/s/aifrbyoungprofessionals



Founding Fellow
HERBERT W. GRAHAM

Herbert William Graham was born in New Brighton, Pennsylvania in 1905. He graduated with a B.S. degree from the University of Pittsburgh, working in the Botany Department of the Carnegie Museum, and received an appointment from the Carnegie Institute to serve as a chemist and biologist aboard the brigantine Carnegie in the South Pacific Ocean.

At that time, the Carnegie was the only sea-going non-magnetic observatory for obtaining geophysical data. Herb conducted chemical analyses of water samples and collected and examined plankton samples, with particular attention to the dinoflagellates. In Apia, Samoa, on November 28, 1929, Herb and two others left the vessel to collect some specimens while the vessel was being re-fueled. There was an explosion aboard the vessel, and it burned to the water line. Several scientists and crew members were severely burned, and the captain and cabin-boy died. All of this is documented in a book published in 1932: *The Last Cruise of the Carnegie* by J. Harland Paul, the surgeon on the vessel. (Herb's duties and activities are mentioned in the book. He was 24 at the time, and may have been the last survivor of that cruise.)

In 1930, having fortuitously escaped the catastrophe, Herb made two momentous decisions. He married Ruth, a partnership that lasted 67 years, and decided to go to graduate school at Stanford University. He had fallen heir to the phytoplankton collections taken by the Carnegie and to a large amount of chemical data. These formed the basis for his studies for the next seven years at the Hopkins Marine Laboratory in Pacific Grove, California, and at the Scripps Institution of Oceanography in La Jolla, California. He earned his M.A. and Ph.D. degrees from Stanford. While at Hopkins, he had the good fortune to spot a sea otter—the first seen in Monterey Bay for decades. After receiving his Ph.D. degree, he accepted a position as Assistant Professor of biology at Texas Christian University in Fort Worth, Texas, then went on to become an Associate Professor of zoology at Mills College for Women in Oakland, rising to the rank of Professor of Biological Sciences. He was Chairman of the Zoology Department from 1941 to 1943. During World War II, his students included women training as nurses. He was an advisor for pre-medical students, and taught courses in zoology, animal ecology, and parasitology, and continued his re-search on dinoflagellates.

Herb joined the U.S. Fish and Wildlife Service (FWS) in 1948 as an oceanographer in the Philippine Rehabilitation Program, and then took the Directorship of the U.S. FWS Red Tide Laboratory in Sarasota, Florida. In 1951, he was appointed Director of the FWS (later Bureau of Commercial Fisheries and National Marine Fisheries Service) Laboratory at Woods Hole, Massachusetts, where he was responsible for developing new research programs relative to the growing international fisheries and to the renewed interest in marine fisheries, resulting from the passage of the Saltonstall-Kennedy Act. During his tenure as Director, Herb was instrumental in acquiring a new research vessel, the Albatross IV, a new laboratory building, and a public aquarium. He was able to strengthen the Service's contacts with the Marine Biological Laboratory at Woods Hole through his friendship with Mary Sears, who had been with the Office of Naval Research when he was with the Carnegie Institute.

Herb was a U.S. representative to the International Commission for the North Atlantic Fisheries (ICNAF). Among the visitors to the laboratory during those years were Vice President Hubert Humphrey and Hurricane Carol, the latter in 1954. He published chapters in books and papers in journals on a wide variety of subjects; the fishery papers were concerned mainly with Gulf of Maine groundfish and topics such as mesh size of trawls. He was among the earliest to discuss ways to manage multi-species fisheries, describing special problems in the New England groundfish fishery, and suggested a seasonal change in "fishing habits" as one means of minimizing the incidental catch, while maintaining the annual value of the catch to the fishermen. (A change of this type implemented in the Bering Sea during the 1970s was successful in reducing the incidental catch of halibut by foreign vessels with no loss in the annual catch of the target species.) In addition to papers concerning the Carnegie collections and those relating directly to fisheries, he wrote about plant succession, sedentary marine organisms, respiratory mold allergy, chlorophyll in marine plankton, and climatic trends.

Herb retired as Director of the Woods Hole Laboratory in 1971. He remained active as a charter member of the Barnstable County Beekeepers Association and taught children the art of beekeeping. His interest in bee-keeping began when he was 10 years old. When he left Pennsylvania with Ruth to attend Stanford in 1930, he drove across the country in a Model A Ford with a bee hive on the running board. When he taught at Mills College, the students in his biology class were given an "open-hive demonstrations," and for 40 years Herb gave those demonstrations to school children. Herb and Bernard Skud participated in an ICNAF meeting in Poland in 1969. While driving in the countryside, he spotted some bee hives in a farmyard, and decided to investigate. The farmer didn't speak English, but Herb and he were able to communicate in sign language. Herb found out all about the operation, including the fact that the hives were constructed with newspapers. Herb's son David set up a hive outside the picture window at Herb's house for him to watch the activities of the bees. Herb's passion for bees, in addition to that for marine biology, remained as keen as ever after his retirement. His reply to the frequently-asked question as to the secret of his long life was: "Eat honey and wheat germ and have pure thoughts."

Continued on page 11

AIFRB UPCOMING SYMPOSIUM IN QUEBEC CITY 2014
Are We Still Fishing Down the Food Web?

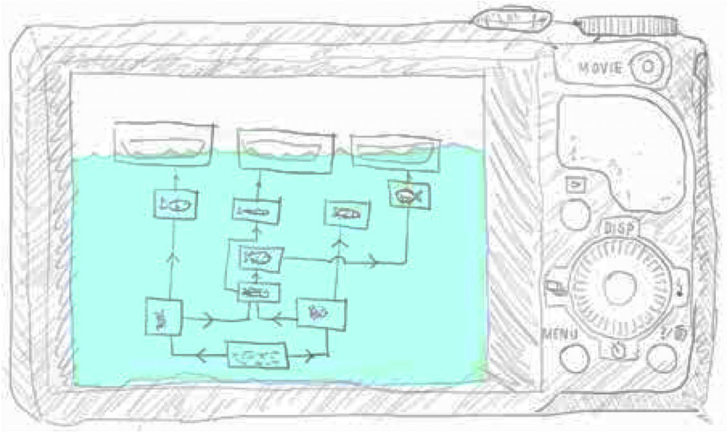


Illustration: Dalai Felinto

Fishing is one of the biggest anthropogenic impacts on marine environments. Traditionally, commercial fishermen have targeted larger fish for their economic value. Consequently, these fish were higher in the food web. A fish's position in the food web can be measured by its trophic level, a weighted mean of the trophic levels of its prey with trophic level one representing primary producers. Just over fifteen years ago, Dan Pauly and his colleagues noticed that the global mean trophic level of the catch was decreasing which they described as "fishing down the food web". Whether through systematic reduction in top predators or sequential addition of lower trophic level fisheries such as sea scallops, this behavior can have dramatic impacts on the ecosystem. With growing emphasis on ecosystem-based fisheries management, what is the value of the mean trophic level of the catch as an ecosystem indicator? This summer at the American Fisheries Society's Annual Meeting in Quebec City, the American Institute for Fisheries Research Biologists will convene a symposium on this subject. There will be keynote presentations by Villy Christensen from the University of British Columbia, one of the originators of the concept of fishing down the food web, and Trevor Branch from the University of Washington. Talks will range from the designation of trophic levels, the economic impact of fishing down the food web, impacts on forage fish and lower trophic level species, and usefulness of the mean trophic level of the catch as an ecosystem indicator. Below is a full list of presenters. Hopefully you can join us in Quebec and join in the discussion!

Last	First	Title
Christensen*	Villy	Fishing Down through the Food Web
Branch*	Trevor	How do fisheries affect marine food webs?
Bell	Rich	Changes in the pelagic/demersal ratio: a meta-analysis of trawl survey data
Brodeur	Rick	Interactions between jellyfish and marine fish and fisheries: insights into fisheries sustainability
de Mutsert	Kim	What's trending in the Gulf of Mexico?
Essington	Tim	Trade-offs between supportive and provisioning ecosystem services of forage species in marine food webs
Fay	Gavin	Is the mean trophic level useful for fisheries management in the Northeast US?
Fogarty	Mike	Diversity and balanced harvesting in ecosystem-based management
Lowe	Mike	Using trophic interactions to better understand the ecology of latent resources of the Northwest Atlantic Shelf Break Ecosystem
Lucey	Sean	A tale of two systems: Testing the robustness of mean trophic level of the catch as an ecosystem indicator
Palomares	Maria	Trophic levels in FishBase and SeaLifeBase
Pikitch	Ellen	Domino ocean: How fishing small fish reverberates through the food web
Rountos	Konstantine	Are we catching what they eat? Assessing mean trophic level of fisheries catch and predator consumption globally
Ruzicka	Jim	Summer jellyfish blooms in the Northern California Current: modeling the impacts upon fish production and evaluating the evidence
Smith	Brian	Using fish diets as ecosystem indicators: are fish feeding down the food web on Georges Bank?
Staudinger	Michelle	Is fishing for squid, fishing down the food web?
Wiedenmann	John	Exploring ecosystem and economic factors influencing patterns of fishery development
Wilen	James	Bioeconomic drivers of exploitation dynamics in trophic systems

* - denotes keynote

Crowdfunding Research: It's the Way of the Future

Brian "J.R." Clark

Traditionally, as researchers and graduate students, we are always told to find scholarships, look for fellowships, and apply for grants. These methods of funding are great, but getting funds for research is extremely difficult these days, especially for projects like mine. Funders want to fund research that they know will succeed – the easy stuff. My research of Giant Sea Bass wasn't considered the easy stuff. Although, Giant Sea Bass are extremely charismatic megafauna, observing their reproductive behavior will not be the easiest task, and with their protected status, putting them in pens is not an option as other researchers have done in the past with other fish species. Hence, even though this research could have a major impact and lead to better preservation of a species that was on the verge of extinction, funders do not get very excited.

Therefore, I went different route. I chose crowdfunding as an alternative means to funding my research. It's still a fairly new concept and can be very powerful and successful when exploiting social media. I see posts about it all the time on Reddit, Facebook, and various blogs from people asking for help funding a variety of different things: a new video game, a gadget that will change the world, and even a plea to help out people with financial problems. It's a source that allows people to fund their dreams and make them reality.

In early September 2013, Dr. Casey terHorst, a professor in the Department of Biology at California State University, Northridge (CSUN) sent out an email suggesting this alternative resource for funding, crowdfunding, with the #SciFund Challenge. The mission of the #SciFund Challenge is to create "a world where people are more closely connected to science." After reading the email I immediately applied to be part of this challenge. The #SciFund Challenge teamed up with Experiment.com – both crowdfunding sites similar to kickstarter and rockethub, but they're unique in that they only fund scientific research and ideas. To date, 23 projects have been launched with the #SciFund Challenge and Experiment.com, spanning all major scientific fields and some very interesting research, including: nudibranchs, Astrocytes, Chromatography, the Acropora-Eating Flatworm and more.

At the tail end of December 2013, I received an email letting me know that my research was accepted. Shortly after that, my inbox was flooded with emails about how to get the project off the ground, with advanced warning that my mission was going live on February 1. That gave me very little time to do a lot of work.

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Northern California District presides over Student Paper and Poster Competition at AFS Cal-Neva Chapter 48th Annual Meeting

For the 14th straight year, the Northern California District of the American Institute of Fishery Research Biologists (AIFRB) presided over the judging of student oral presentations and posters at the American Fisheries Society 48th Annual Cal-Neva Chapter Meeting that took place on March 17-29, 2014, in Sacramento, California. Nine student papers and six posters were in the running for cash prize awards, including $150 each for Best Student Presentation and Best Student Poster. Best Student Presentation and Poster, Runner up were each awarded $125. There was a tie for third place in the Best Student Presentation category, both of whom received $75, as did the Third Place Poster. This year an Honorable Mention was also presented ($50) in the Best Student Presentation category. The 2014 award winners were:

Student Presentations
Best Student Paper: Megan Sabal, UC Santa Cruz; Best Student Paper Runner Up: Jamilynn Polleto, UC Davis; Best Student Paper Third Place (tie): Ethan Mora, UC Davis
Best Student Paper Third Place (tie)
Tye Nichols, San Diego State University; Honorable Mention Emily Miller, UC Davis

Student Posters
Best Student Poster: Katie McElroy, UC Santa Cruz; Best Student Poster Runner Up: Kristina Ho/Katie Lee, UC Davis; Best Student Poster Sarah Baird, UC Davis

Congratulations to the winners and many thanks to the Northern (and Southern) California District member judges who participated in the student evaluations.

Tom Keegan

Continued from page 10

The first step was to start a twitter account (my handle: @protectdafishes). Twitter is used to reach out to communicate to other scientists and researchers. I'd never tweeted so much in my life.

The next step was to write a synopsis about the research with a budget, goals, and the importance; which you would think was easy since I had already had done it for my thesis proposal, but writing to appeal to professors is completely different than writing to appeal to the general public. I quickly learned how hard it is to talk science without being *too sciency*.

The last request was probably the most challenging: make a video. They wanted something short, sweet, and to the point. Personally, I would rather have climbed Everest than stand in front of a camera, but with the help of my lab mate, Parker House, I was able to make it happen (we only reshot each scene, give or take, 50 times) and I have to say, it was probably the most enjoyable part of building my crowdfunding page.

All during this time I was working on a webpage – and after what felt like a 100 drafts of what was to go on there, along with edits from the #SciFund and Experiment.com teams – I was ready to go live. We got a later start than anticipated and I launched my project February 7th.

Experiment.com allows you to see the metrics: the page traffic and where it came from, plus the amount of funding raised, so I was constantly checking to see if any funds had been raised and trying to find new sources to help promote and spread the word about the project. I'd posted all over the Internet: Facebook (on my personal profile, on various marine biology and crowdfunding groups, even my friends shared and posted my plea for funding), Linkedin, Twitter, Tumblr, Reddit (I ended up having 3 accounts banned because I posted so many links), over email (I'd sent out hundreds) and a variety of other blogs and forums. By the 16th day, I had almost reached 60% of my goal. I had 14 more days to reach my 100% goal – which was imperative. The way the Experiment.com crowdsourcing works is that if you don't get 100% you don't get any of it. The reason? They don't want the quality of the research compromised because only part of the budget was obtained. I personally agreed, as the philosophy went with my "go big or go home" mentality.

In the end I went big and I won. And hopefully my research will help the Giant Sea Bass win a little something down the line, too.

Crowdfunding research could be the way of the future. It allows researchers to interact directly with their donors and Experiment.com goes one step further. Researchers can post "lab notes" to keep donors updated and involved with the research experience. Because of crowdfunding sites like Experiment.com, scientists are able to ask and answer "high-risk" questions that we normally wouldn't be able to since traditional funding sources are unable to financially back our research. I'm excited to see all the doors that crowdfunding opens up for researchers everywhere.

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Dr. Herbert Graham died at home in Woods Hole, Massachusetts, on January 29, 2009. He was 103 years old.

References

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Read more of the fascinating life of Herbert Graham by visiting www.aifrb.org /founding-fellow-herbert-graham

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Spotlight on Member Website Bernard E. Skud

Former Director:(BCF/NMFS Fisheries Lab, Boothbay Harbor, Maine)

The main purpose of this Website is to report on a little known collection of data by NMFS that spans some 40 years. The story begins in the 1930's when the U.S. fishery agency established a research station at Little Port Walter (LPW), Alaska to study pink salmon. A unique two-way weir was constructed at Sashin Creek to enumerate spawners and their progeny — as they migrated to sea. The objective was to determine which factors controlled the varying percentages of annual survival. Based on data from 1940-1955, a promising hypothesis stating that the size of spawners controlled the time of spawning which itself was correlated with the survival rate (Skud, 1958). In subsequent years, Merrell (1962), McNeil (1968) and Ellis (1969) confirmed the relationship and showed that the time accounted for 90% of the survival.rate for 25 years, Skud (1973) summarized the "size -time-survival" hypothesis and presented supporting data from other sources in Alaska and British Columbia — there has been no publication since that confirms or negates the "size-time-survival hypothesis."

Now for the rest of the story: The weir deteriorated in the late 1960's and a new method of estimating the abundance of fry was introduced, i.e. salmon nests were sampled with hydraulic pumps. Other changes have also occurred — pink salmon from another river have been introduced into Sashin Creek, and sampling for fish size has been very limited in some years and not always distributed over the entire spawning period — the earliest spawners are larger and inadequate sampling could distort the mean size.

This problem led to another purpose for this website, which is to call attention to a few papers of mine that were not published in North America and, along with others now "out of print," that are not readily accessible on the Internet. None of my halibut papers are included on this website, as they are available in the "library" of the IPHC website. VISIT: skudbe.net

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COME TAKE A LOOK AT THE NEW WEBSITE: AIFRB.ORG

Tom Ihde has been working hard to bring you a new website - and now you have it!

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