American Institute of Fishery Research Biologists
Promoting excellence in fishery science

. . . BRIEFS . . .

www.aifrb.org

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AIFRB Has A Request

We are requesting:

- **all members to provide us with an email address**
- **our members opt to receive newsletters and *Briefs* electronically**

Greetings AIFRB Members,

From AIFRB's incorporation in 1956 to the present, the Institute has conducted nearly all its business via US Postal Service. However, the standard for conducting business has changed dramatically since the inception of the World Wide Web, and it only makes sense that we, as an organization, would also conduct the business of the Institute through this portal. It allows the Board to reach our entire membership in a matter of minutes, and allows our members full and immediate access to the Institute, especially through our vastly improved website aifrb.org. In what used to take weeks, new membership applications can be reviewed by the Membership Committee, and dues can be paid immediately, thereby allowing for immediate approval and update of membership. Transferring our means of doing business to an electronic standard will also save us hundreds to thousands of dollars, by eliminating mailing and postage costs for newsletters and other notices. We can surely put that money to better use, funding student research awards and our suite of professional awards, as well conducting other business of the Institute.

Because of the immense power that this will afford us, we now intend to conduct all primary business of the Institute through the Internet and email. In order to take full advantage of this, **we are requesting all of our members to provide us with an email address. We also are requesting that our members opt to receive newsletters and *Briefs* electronically.** For a brief transition period, we will still honor requests for hard copies of newsletters and *Briefs*, but we're strongly encouraging the membership to join us in this venture in the spirit of the green revolution. In the near future, members can expect to receive email blasts regarding the important business of the Institute. From time to time, it will still be necessary to use the postal service, so we also ask the membership to please update your contact information.

Sincerely,
Tom Keegan, President
Thomas.Keegan@aecom.com

Please Come Join Us!

Website www.aifrb.org

Facebook facebook.com/aifrb

Twitter twitter.com/AIFRBResearch

President's Message

Greetings AIFRB Membership!

This is my first message to the membership since our Board of Control (BOC) meetings in Portland in August 2015. To summarize, the state of our Institute is good. An organization is only as great as its people and their passion to make it succeed, and in that regard, we are in excellent shape. We have the right people in place to continue making prodigious strides for growth and relevance to our industry, in both public and private sectors, as well as in academics. Our membership chair, Todd Chapman, informs me that our membership continues to grow, with record recruitment in 2014 and 2015, as well as record membership applications submitted.

What is particularly pleasing to me is that we are receiving applications from biologists throughout the country, and not just from our active districts. We also continue to receive members from Canada. We have had the pleasure of adding new district directors, and we continue to search for those candidates who are interested in working with us to develop new, active districts (please contact me if you are interested or have someone else in mind: Thomas.Keegan@aecom.com). During our recent BOC meetings, we had to struggle to increase our operating budget, which required frank and honest discussion.

One outcome of those discussions was to raise our annual dues, but only by $5, to a Member rate of $45…still the best deal in town! We have discussed raising our dues since 2013, but the BOC has held off until we felt it absolutely necessary. We felt that only a modest increase was necessary because we believe our other action items will achieve our other goal of increasing our available funds to support our science. One of those actions will be to focus efforts at the district level, pushing for timely dues payments by our members. We have changed our dues payment timing to coincide with the calendar year, instead of the fiscal year. You are now receiving dues notices now for 2016, which upon payment during this transitional year will keep you current through December 31, 2016. Although we have provided an extensive grace period in the past – in many cases for a number of years – we really need our members to make timely and regular dues payments going forward.

Speaking of having the right people in place, we are pleased to introduce our new treasurer, Cate O'Keefe, who will be working very hard to achieve our fiduciary goals. She takes over from our past treasurer, Allen Shimada, who has worked so hard for the Institute for 15 years. Al will focus his efforts on the Institute's financial investments and special projects.

Another action item from the BOC is to continue support to our website and newsletter, *Briefs*, since both present the face of AIFRB. Tom Ihde and Sarah Fox have worked hard to transition from our hard copy of *Briefs* to a digital copy. *Briefs* and the website now have a new focus - to primarily report on membership news and member research. Though in the past, our website has been a source of fisheries research being conducted around the globe, you will see a change in focus of our member's research. To continue to make this work for our membership outreach and to promote your good science, we need our members to provide news updates, as short and succinct or as long and detailed as you wish, for inclusion into *Briefs* and on the website. Please work with your district director and district membership to provide us with this news on a regular basis. Consider this invaluable outreach to your fellow scientists. (Please contact sarah@aifrb.org.)

In the coming years remaining in my presidency, I intend to continue the focus on district development and district director coordination; because I believe that the Institute is most relevant at the district level. Our directors are the front line in our campaign to improve and grow the Institute, and your BOC intends to provide the support necessary for successful districts wherever fisheries research is being performed.

LOOK for your membership renewal envelope in the mail!

Please return this envelope with your membership dues and contact information!

American Institute of Fishery Research Biologists

2016 MEMBERSHIP YEAR DUES NOTICE

(SEPTEMBER 1, 2015 - DECEMBER 31, 2016)

For credit card payment visit www.aifrb.org

Dear Colleague:

Please return dues as indicated

Professional Associate / Member / Fellow	$45.
Student Associate	$25.
Emeritus Member / Fellow	No Dues.
	$_____

❒ I wish to make a **tax-deductible donation**

❒ I already paid 2016 dues and am providing contact information only.

Future communications will be electronic, ALL MEMBERS please provide requested contact information:

Name: _____

Email: _____

Address: _____

Welcome New Members and Congratulations to Those Promoted

New Members

Jessica Andrade – Student Associate
Abigail Franklin Archer – Member
Alexandra N. Atkinson – Student Associate
Alexandra M. Avila – Student Associate
Crista Bank – Student Associate
John P. Blum – Member
Mark Douglas Bowen – Fellow
Keith Lowell Bosley – Member
Andrew K. Carlson – Student Associate
Kristin Cieciel – Member
Jean P. Davis – Member
John S.S. Denton – Member
Stephen J. Eayrs – Student Associate
Christina C. Fahy – Member
Kari Hammarsten Fenske – Student Associate
Sarah C.F. Hawkshaw – Student Associate
Steve Howard – Member
James Ianelli – Fellow
Emily A. Jones – Professional Associate
Margaret Jones – Student Associate
Jacob M.C. Kasper – Member
Emily Morgan Liljestrand – Student Associate
John W. Mandelman – Member
Megan V. McPhee – Member
Emily Nicole Meese – Student Associate
Sara E. Miller – Member
Franz Mueter – Fellow
Robert Mussgnug – Professional Associate
Sandra L. Parker-Stetter – Fellow
Rebecca Peters – Student Associate
Amanda Ramshaw – Student Associate
Stephen Gray Redding – Student Associate
Dennis K. Riecke – Member
Lauren A. Rogers – Member
Stacy Schkoda – Student Associate
CJ Carroll Schlick – Student Associate
Manoj Shivlani – Member
Amanda Michelle Sills – Student Associate
Cara Simpson – Student Associate
Matthew R. Siskey – Student Associate
Natalie M. Sopinka – Member
Brian S. Stirling – Student Associate
Jane Sullivan – Student Associate
Cacy Zampa Sylvester – Student Associate
Darin T. Topping – Member
Tara S. Topping – Member
Jessica A. Walsten – Professional Associate
Connor F. White – Student Associate
Noelle Yochum – Student Associate
John R. Young – Member

New Promotions

Emeritus

Donald L. Beyer
John G. Boreman
Ramon J. Conser
John E. Cooper
Robert F. Donnelly
John W. Jolley Jr.
Linda L. Jones
Ronald J. Klauda
Thomas R. Lambert
Phillip A. Lebednik
Brian J. Rothschild
Larry R. Scofield
Fredric M. Serchuk
Susan E. Smith

Fellow

Kurt M. Schaefer
Michael S. Trianni
William A. Walsh

Member

Matthew J. Breen
Stephanie M. Carlson
Piera Carpi
Greg DeCelles
Jonathan Freedman
Diasuke Goto
Christopher W.D. Gurshin
Bradley P. Harris
Linda A. Lalicata
Christopher J.B. Martin
Coley Susan Hughes
Abigail J. Lynch
Jeremy Pritt
Jennifer P. Stahl
Chiara M. Zuccarino-Crowe

Professional Associate

Alix Blake
Brandon Harris
Kelsey Lincoln
Sara Turner

AIFRB News

AIFRB Members Co-authored 10% of All NMFS Peer Reviewed Papers in 2015

Via Allen Shimada: "One of my 'special projects' on hold has been to get as good a list of recent publications by AIFRB members as possible, and the NOAA central library has given me the source material at least as it relates to all NMFS publications in fiscal year 2015." Seventy-one of 716 NMFS papers were co-authored by AIFRB members or 10% of all agency peer-review papers in 2015.

AIFRB Member Jesse Trushenski Elected Second Vice President for the American Fisheries Society

AIFRB member Jesse Trushenski has been elected as the Second Vice President of the American Fisheries Society. Jesse is one of the world's leading fish nutritionists. "As an AIFRB member and an AFS member, I feel we can continue to build stronger ties between the two organizations," she said. Jesse has also started a new job at the Idaho Department of Fish and Game as a supervisory fish pathologist. We congratulate Jesse Trushenski!

Dr. Joseph Rachlin (AIFRB Member) Career Honored

(Joe Rachlin is an AIFRB Fellow and also served as Treasurer for 10+ years prior to Allen Shimada taking over.)

The illustrious career of pioneer river researcher, Dr. Joseph Rachlin (AIFRB member), director of the Laboratory for Marine and Estuarine Research at CUNY's Lehman College, is honored. Joe has built a 48-year career as an aquatic ecologist in the watershed, without straying far from his Bronx birthplace. In celebration of his accomplishments, he receives the Environmental Consortium of Colleges & Universities' "Great Work Award in Honor of Thomas Berry."

Beginning with his grad work in the late 1960s, when environmental awareness was at low ebb, Joe has devoted himself to advancing scientific knowledge and understanding, while training a new generation of researchers to do the same. The restoration work he and his students have carried out on the Bronx, Saw Mill and East Rivers are testimony to that fact. Joe epitomizes our common mission to make the Hudson-Mohawk a recognized center of environmental learning and research.

Read the beautiful endorsement from Yuri Gorokhovich, who nominated Joe:

"Dr. Rachlin miraculously combines research, service, teaching and leadership in a seemingly effortless manner, creating a strong and healthy concoction that nurtures everybody around him. In terms of scholarship and teaching he focuses on local, Hudson Valley area and shows students how beautiful and productive research can be at home, right in our neighborhood. In my opinion, this is what we mean by saying "to see a world in a grain of sand." This is a link to the Biosphere – Lithosphere in action, right here, in the Hudson Valley, along the spirit of Vernadsky – Teilhard du Chardin – Thomas Berry!"

environmentalconsortium.org/news/annualmeet_agenda.html. Award presented at the annual conference on November 6-7, 2015, hosted by Vassar College in Poughkeepsie, NY.

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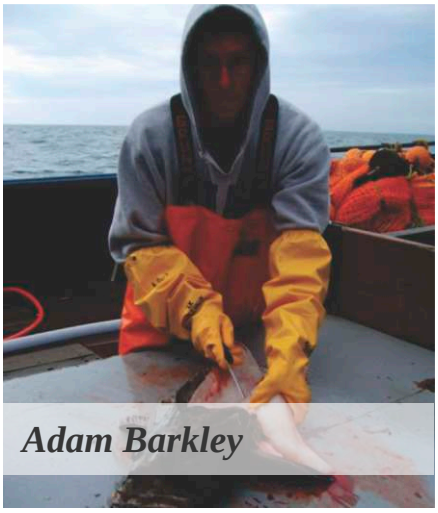
AIFRB Volunteer Network

One of the strengths of AIFRB is the opportunity to interact with a diversity of professional fishery biologists.

In the Board's discussion about promoting recruitment of young scientists, one idea that was proposed was a volunteer network. Many members are in positions that offer volunteer opportunities that are valuable to people whose careers would benefit from a diversity of professional experience. An excellent example of the mutual benefits of a volunteer network was demonstrated by a Gulf of Alaska Survey*. A few years ago, Allen Shimada forwarded a message from the NMFS Alaska Center with an "urgent need for people with the interest and energy to fill spots in the NMFS scientific party aboard chartered fishing vessels participating in the Gulf of Alaska groundfish trawl surveys over the summer." The UMass School for Marine Science and Technology (SMAST) had a large group of first-year graduate students, and four of them took advantage of the opportunity. I asked each of them to share their perspectives on the experience.

Sally Roman

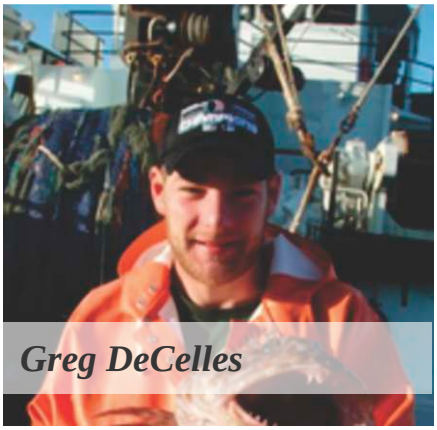
Sally Roman — I was on Leg 2 departing from Sand Point and landing in Kodiak from June 12th to July 1st on the *F/V Gladiator.* The cruise was great because I have experience as a fisheries observer on commercial boats, but had never participated in a survey before. Also, my fisheries experience is limited to the east coast so getting to travel to Alaska and see the different species of fish was exciting. The crew of scientists and fishermen that I met were friendly and it was great to get a different perspective.



Adam Barkley

Adam Barkley — I was aboard the *F/V Gladiator* during leg IV. I found that being part of research on the West Coast gave me a better appreciation for the complexity of fisheries management. I got a closer look into how scientists on the other coast of the United States were handling management of over fished populations and areas. I

also got a glimpse of the process of fishing on the West Coast. I found that the fisherman we work with in New Bedford as well as those aboard the *F/V Gladiator* were all interested in the science backing management decisions. I enjoyed the fellow scientists onboard and was very surprised to find that many of the problems that we are faced with on the East coast are also problems on the West coast. This was definitely an experience I will never forget, and will indefinitely help me with my future career in fisheries science.


Greg DeCelles

Greg DeCelles — I flew in to Anchorage on July 17th. After a two hour drive through the beautiful Kenai Fjords National Park, I met the boat at Seward and we departed the next day. After the first haul I was already amazed at the quantity and variety of fish and invertebrates in the Alaskan waters. My excitement continued throughout the trip as we came across a salmon shark, several giant halibut, salmon and many other species that I had never seen before. I was also struck by the incredible scenery and beautiful sunsets throughout the trip. While at anchor in Sea Otter sound we were treated to a private show by a pod of four humpback whales. After twenty days at sea and two stops in Yakutat and Sitka we arrived in Anchorage at the end of the trip. While I was relieved to be back on dry land, I was also reluctant to leave behind my new favorite place.


Jess Melgey

Jess Melgey — My experience on the Alaska Fisheries Science Center Gulf of Alaska Groundfish Survey was an excellent opportunity to meet scientists and fishermen from the Northwest and learn a new ecosystem. From examining stomach contents of commercially important species with experienced scientists to discussing policy and comparing notes between fisheries in the Northeast and the Northwest United States with a knowledgeable captain, it was an invaluable chance to meet people and widen my scope of knowledge in the field as I pursue a graduate degree. These four experiences are just recent examples of an AIFRB network that facilitates volunteer opportunities. Barbara Warkentine's students have been volunteering on NMFS Northeast Center surveys for years. The next time you have volunteer opportunities, please use the AIFRB network to spread the word. *2007

AIFRB Clark Hubb Awardees

Molly Good — Molly is currently a doctoral student in the Department of Fisheries and Wildlife at Michigan State University. She works with Dr. Bill Taylor, a University Distinguished Professor in global fisheries systems, and others to improve fisheries management and enforcement strategies in the Great Lakes Basin.


Molly Good

Natasha Gownaris — Natasha is entering her last semester as a PhD Candidate at the School of Marine and Atmospheric Sciences of Stony Brook University, NY. Natasha's main research interest is aquatic community ecology, and particular in aquatic food webs and how they are perturbed by humans. For her dissertation research, Natasha is conducting a multi-faceted study aimed at understanding how reduced water inflow due to upstream development will impact the fishes and fishery of the world's largest desert lake, the understudied Lake Turkana in Kenya.


Natasha Gownaris


Kristen L. Omori

Kristen L. Omori — Kristen defended her master's thesis this summer (2015) on "developing methodologies for studying elasmobranchs and other data-poor species". She will be starting her PhD at VIMS in population dynamics and stock assessment for data-poor species and is interested in studying the multispecies fisheries.


Judith Rosellon-Druker

Judith Rosellon-Druker — Judith is a PhD candidate at the University of Massachusetts Dartmouth, School for Marine Science and Technology. Her graduate research examines the population dynamics of echinoderms on Georges Bank. This research intends to enhance current biological information towards the implementation of Ecosystem Based Fisheries Management since echinoderms are the preferred prey for some commercially targeted groundfish and invertebrate species in this area. She is a Fulbright Scholar from Mexico and received her B.S (summa cum laude) at the National Autonomous University of Mexico (UNAM).

So-Jung Youn — So-Jung is currently an MS/PhD student with Dr. William Taylor at Michigan State University. Her research focuses on the contribution of inland fisheries to food security and livelihoods. In particular, So-Jung is interested in the utilization of inland capture fisheries and the inland fisheries value chain in Southeast Asia.


So-Jung Youn

AIFRB In Action

American Institute of Fishery Research Biologists Lead NOAA Survey

Notable AIFRB Members of this NOAA survey are:

- Oscar Elton Sette was an AIFRB Founding Fellow
- The chief scientist Dr. Don Kobayashi is an AIFRB Fellow
- Michael Trianni is an AIFRB Fellow (and oversees the NMFS Pacific Islands Fisheries Science Center Saipan Field Office)
- Dr. John Denton is a new AIFRB member and is with the American Museum of Natural History in NYC

On June 11, 2015, a research team under the leadership of **Dr. Donald R. Kobayashi**, from the NOAA Pacific Islands Fisheries Science Center (PIFSC) Ecosystem Sciences Division, departed Saipan aboard the **NOAA Ship *Oscar Elton Sette*** (Figure 1) to conduct research operations in the waters around the Northern Mariana Islands (Figure 2).

During this 17-day multidisciplinary mission, a team of PIFSC scientists in collaboration with colleagues from the NOAA NMFS Office of Science and Technology, the Joint Institute for Marine and Atmospheric Research at the University of Hawaii at Manoa, University of Hawaii at Manoa Marine Biology Program, Hawaii Pacific University, University of Guam, Northern Marianas College, American Museum of Natural History, and Micronesian Environmental Services, will be working on two principal objectives and several ancillary projects. The principal objectives share a common theme of furthering our understanding of two understudied ecosystems with a rigorous field survey approach. This descriptive characterization is extremely important from biodiversity and biogeography perspectives.

The first principal objective will be to survey soft-bottom ecosystems in the region with special reference to the distribution and abundance of the brachyuran crab species Ranina ranina. This crab, known as the red frog crab, spanner crab, or Kona crab, is widely distributed across the Pacific and Indian Oceans in sandy-bottom habitats. It is an edible crab that generally supports sustainable, small-scale fisheries where it is found in abundance. Considering the depth and remoteness of some of the soft-bottom areas in the Marianas

Figure 1. Seen in the background, the NOAA Ship Oscar Elton Sette is named for Dr. Oscar Elton Sette, a fishery oceanographer who was the founding Director of the Honolulu Laboratory, which has since become the Pacific Islands Fisheries Science Center.

Archipelago, there is a lack of information on this species yet strong local science partner interest in better understanding the potential distribution and abundance of this species in the area. Such a project was put forth at the "Marianas Trench Marine National Monument and Mariana Archipelago Ecosystem Science Implementation Plan Workshop" that was held in Saipan in May of 2013, and was subsequently chosen by the PIFSC to complete using a research team from the NOAA ship Oscar Elton Sette. The project was originally slated for 2014 but had to be postponed to 2015 due to scheduling delays. The soft-bottom survey will be undertaken by both small-boat and ship platforms using a variety of trapping gear and optical gear. A spatially-balanced, randomized-point survey design taking into account several disparate sources of habitat data was developed using an algorithm called RRQRR (Reverse Randomized Quadrant-Recursive Raster) in Arc-GIS by PIFSC GIS staff.

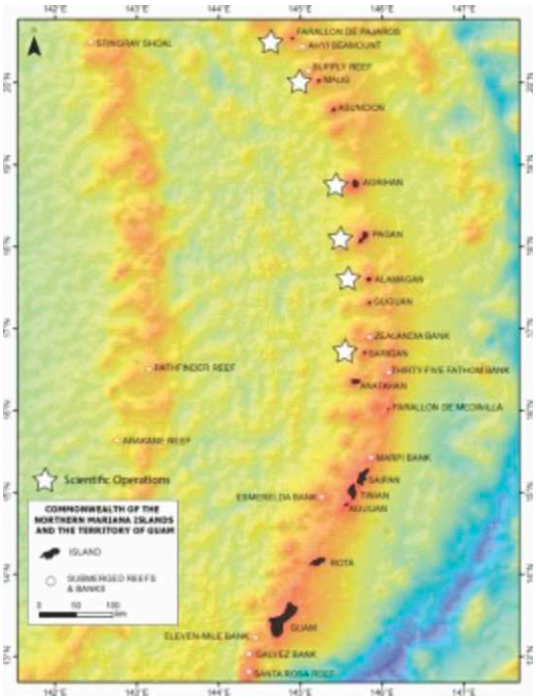


Figure 2: Northern Mariana Islands

The second principal objective will be to survey midwater ecosystems in the regions with a Cobb-Stauffer, dual warp, midwater trawl towed from the ship. The midwater trawl catch will be used for several different project components including studies of oceanographic connectivity, productivity and forage availability, and development of a midwater species checklist for the region. The midwater fish and invertebrate assemblage is not well characterized in the region and this survey will be very useful towards formal description of the micronekton community in the Mariana Archipelago. Latitudinal patterns in trophic relationships will be addressed by using stable isotope analysis on selected portions of the trawl catch.

Ancillary projects include genetic sampling from trapping and trawling catch to assist in the "Barcode of Life" project, biosampling of commercially important demersal and pelagic species for needed life history data, plankton net surveys of microplastic/microbead distributions, conductivity-temperature-depth (CTD) casts to understand mixed-layer ocean dynamics, and dipnetting/nightlighting operations for sampling epipelagic organisms.

Credit: PIFSC

Photos 1: SE 6 arriving back at the Oscar Sette after a day of surveying.

Where are all the *Ranina ranina*?

By Lauren Van Heukelem

One main objective of the SE1503 cruise aboard NOAA ship Oscar Elton Sette was to survey the Commonwealth of the Northern Mariana Islands (CNMI) for *Ranina ranina* (Kona crab or spanner crab) that have been rumored to exist in the archipelago. This species is widely distributed across the Pacific and Indian Oceans in sandy-bottom habitats.

All SE1503 Kona crab surveying efforts were undertaken by the crew of PIFSC small boat called SteelToe (SE6) and later after mechanical issues the Sette small boat called SE4. Both small boats were deployed off the Oscar Elton Sette nearly every day of the project with the exception of the days that we traveled between islands (Photo 1). Operations onboard SE6 began every morning at 7:30am with a small boat meeting and ended at 16:30 each evening, just in time for dinner. The crew consisted of our SE6 coxswain and SE1503 Small Boat Logistics Lead Jamie Barlow and deck crewmember Tony Flores. The remaining crew rotated between the scientists of SE1503 taking turns being data recorders and deck helpers throughout the cruise. The primary helpers were Lauren Van Heukelem, Erin Kawamoto, and Eric Cruz, but nearly all the SE1503 scientific staff and some Sette staff did a stint on SE6 or SE4 during the mission.

Photo 2 : Sardine baited ring nets used for Ranina ranina capture.

The surveys consisted of throwing eight sardine-baited ring nets attached to a 300ft ground line in sandy areas, considered to be optimal habitat for Ranina ranina, based on maps created for this cruise (Photo 2, 3, and 4). An example map is shown down below for Sarigan, where our spatially-balanced random point trapping survey locations are shown. These stations are located on prospective soft-bottom habitats and represented the starting points for our survey as we worked our way through the archipelago (Map 1). We came outfitted with a large set of poster-sized charts for the science party to examine

Photo 3: Tony Flores and Lauren Van Heukelem preparing to deploy a set of eight ring nets attached to a 300ft ground line

Photo 4: Jamie Barlow getting us in position while the crew prepares the nets.

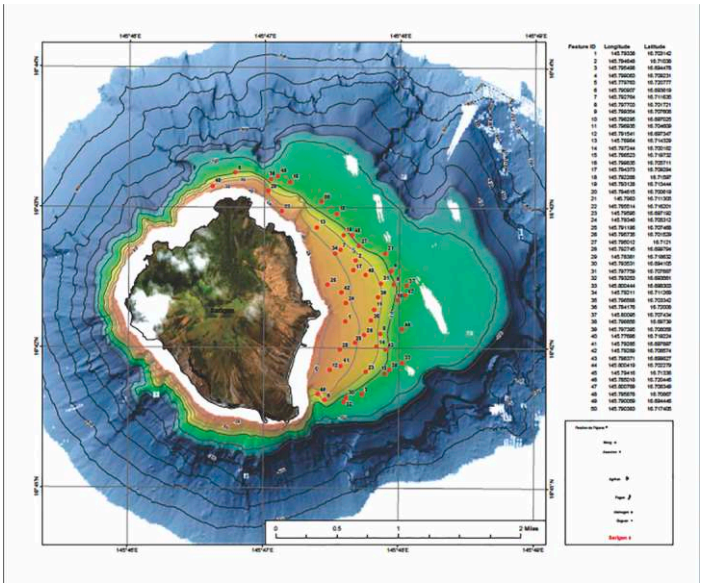
and mull over for the following day of operations, and we also shared a copy with the ship's bridge. Much thanks to the PIFSC Mapping, GIS, and Graphics staff for generating these products for our project. These survey locations were located at a range of depths up to ~125m. The gear was left for a soak time between 30-60 minutes and then retrieved. Species were recorded upon coming up in each of the eight ring nets. Predation by sharks and other species was also recorded based on condition of bait and nets (Photo 5). We were also able to deploy a camera attached to one of our baited ring nets and view predation events occurring during the net soak time. This particular trap had five sharks fighting over the bait (photo 6). We also took some bottom grab samples to help validate the habitat mapping.

Unfortunately we were unable to confirm that Ranina ranina was present in the CNMI. Seven islands were surveyed (Uracus, Maug, Agrihan, Pagan, Alamagan, Guguan, and Sarigan) using a total of 101 ground lines with 808 nets deployed in various depths and no Ranina ranina were recorded. Although we were unable to locate Ranina ranina during our surveys, this does serve as a useful set of data points towards a better delineation of the distribution and abundance of this species across its range. During the course of the survey we were also able to assist in collecting samples for our fellow scientist Allison Miller when invertebrates came up in our ring nets. This allowed her to sample not only the nearshore ecosystems but also in deeper areas for her genetics study.

Reprint / Credit: PIFSC

Photo 5: Jamie Barlow brings up a ring net that had had the bait removed by a predator.

Photo 6: Video screenshot of shark removing bait from a ring net.



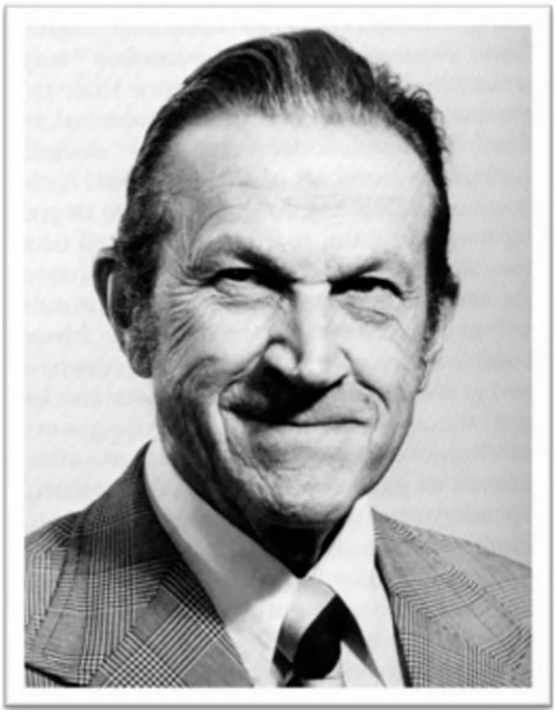
Map 1: Example map of Sarigan and our spatially-balanced random point trapping survey design targeting prospective soft-bottom habitats in the depth range 0-125m.

Critical Aspects of Stock Assessment Science

Top professors from around the country provided short lectures on critical aspects of stock assessment science at the “Monsters of Stock Assessment” workshop held in Portland, OR in August 2015. The workshop attempted to “de-mystify” stock assessment science, and to raise funds for the AFS Estuaries and Marine Fisheries Section student travel awards. Lecture topics included incorporating ecological interactions in stock assessments, communicating stock assessment methods and results, having fun with population dynamics models, and examining whether sex matters to models (a retrospective perspective). The workshop name was a play on the 1980s “Monsters of Rock” tour that brought together the best heavy metal bands in the world to play together. The workshop consisted of opening remarks and then eight twenty-minute talks. Attendees were asked to offer a donation, and AIFRB contributed $150.00 to support the workshop. AIFRB members contributions included introductory remarks on "a Mötley Crüe of presentations" by Rick Methot, "Megadeth: The story of recruitment in fishes" by Mary Fabrizio, "Maximum sustainable yield: organizing concept or rubbish?" by Steve Cadrin, and "The meaning of life through mathematical modeling" by Terry Quinn. The workshop closed with a rendition of Joni Mitchell's "Both Sides Now" by Terry and Steve.

Founding Fellow Karl F. Lagler

William H. Bayliff, Editor



Karl F. Lagler was born on November 15, 1912, in Rochester, New York. He earned his A.B. degree at the University of Rochester in 1934, his M.S. degree at Cornell University in 1936 (zoology and fisheries), and his Ph.D. degree at the University of Michigan in 1940 (zoology) under the late Carl L. Hubbs. A member of the Michigan faculty for 43 years, Karl supervised the graduate work of more than 110 students, who eventually became leaders in fishery management all over the world. He helped found the Department of Fisheries in the School of Natural Resources in 1950, and served as its Chairman for 15 years. He was Professor of Fisheries and of Zoology and was closely associated with the Institute for Fisheries Research of the Michigan Department of Natural Resources (formerly the Department of Conservation), training numerous personnel who joined that organization. He also maintained close ties to the Museum of Zoology, to which he contributed many valuable fish collections made during his farflung travels. He was named the Justin W. Leonard Distinguished Professor of Natural Resources in 1977, six years before his retirement. Dr. Lagler travelled widely as a much sought after consultant and biologist for government and private agencies, including the United Nations (Food and Agriculture Organization and World Health Organization), the U.S. Fish and Wildlife Service, the Wildlife Management Institute, the Sport Fishing Institute, and several state conservation departments. Karl had a particular interest in fisheries development projects in third-world countries, with an emphasis on minimizing ecological perturbations. His travels took him to Western Europe, Alaska, Southeast Asia (Mekong River Survey), Africa, South America, Kampuchea, and Bangladesh. In 1983, he served as a leader of the University of Michigan Gambia River Basin Studies. His diversified research interests included predation, natural history, anatomy, hybridization, fishery biology, ecology, and planning and development of man-made lakes. His publications number more than 150 technical and semi-popular papers and manuals, plus several well-known books, including senior authorship (with John E. Bardach, Robert R. Miller, and Dora R. May Passino) of “Ichthyology,” which went through two editions, and “Freshwater Fishery Biology.” Karl was probably best known to ichthyologists for his collaboration in the production of Hubbs and Lagler's “Fishes of the Great Lakes Region,” initiated as a set of keys in 1939; the book was last revised in 1964. In addition to its value as an identification guide and for remarks on postglacial history and zoogeography, this work set the standards for counting and measuring fishes. In 1961 he received the Gold Medal and Diploma of the French Academy of Agriculture for co-authorship of a volume on fisheries of world continents. He was a fellow of the American Association for the Advancement of Science, a fellow of the International Academy of Zoologists, a Founding Fellow of the American Institute of Fishery Research Biologists and President of that organization during 1967-1968, a life member of the American Society of Ichthyologists and Herpetologists, an Honorary Member of the American Fisheries Society, and a member of the American Society of Limnology and Oceanography and the Society for the Study of Evolution. Active

Continued on Page 11

In Memoriam

We have to recognize that fish stocks are public trust resources. They don't belong to four or five large fish companies. They belong to the public. -- William F. "Zeke" Grader, Jr.

From Sublegals

PCFFA, IFR MOURN DEATH OF THE LEGENDARY ZEKE GRADER: William F. "Zeke" Grader, Jr., the former executive director of the Pacific Coast Federation of Fishermen's Associations (PCFFA) and the Institute for Fisheries Resources (IFR), and a fierce advocate for wild fish and the men and women who harvest them, died on September 7 after a long illness. He was 68. Zeke was a pivotal figure in the fight to preserve the West Coast's rivers, estuaries and fisheries, uniting the environmental and commercial fishing communities in common cause. He was a familiar figure in both Sacramento and Washington, and could be confrontational or charming, depending on the situation and audience. Regardless of approach, his support for sufficient and clean water, abundant fish, and an economically sustainable commercial fisheries was unwavering. "Zeke was a prime example of complete dedication to a cause," said current PCFFA and IFR executive director Tim Sloane. "Fisheries protection consumed him. Just a few days before he died, he was working on the preface to a book he was co-writing on the history of fishing on the West Coast. His efforts to protect fish and habitat were always guided by his belief that the culture of the fishing community was worth protecting, and he wasn't afraid of anyone who threatened that culture's right to exist and thrive." Patricia Schifferle, the principal and director of the environmental consulting firm Pacific Advocates, an advisor to PCFFA, and one of Zeke's long-time friends, described him as "…a great warrior for fishing men and women, salmon, and the ecology of San Francisco Bay and the Sacramento/San Joaquin Delta. What I recall most about Zeke was his ability to cut to the chase and fight against all odds, demanding the water flows essential for the health of our salmon and other species essential to our fishing heritage." PCFFA President Dave Bitts said the relatively good condition of West Coast fisheries is a direct result of Zeke's work: "We have fairly robust fisheries on the West Coast, with mostly owner-operated, family-owned boats. This is Zeke's legacy. That's how it's supposed to work, and it's up to the rest of us to keep it that way." IFR President Pietro Parravano said Zeke was able to explain the connections between the natural world, fishing communities, and society at large in terms that were both eloquent and understandable: "Zeke gave human values to fish, fishery habitat, to ecosystems, to oceans. His vision was embedded in his life-long quest for teaching others the ecological, social, and economic importance of sustaining domestic fisheries. He was a true educator and legend."

Zeke's roots in the West Coast fishing community were multi-generational. Born in Bellingham, Washington, he moved with his family to the Mendocino County fishing and timber community of Ft. Bragg in 1950. There, family members helped his uncle manufacture fertilizer from fish scraps. Zeke's father, Bill Grader, ultimately founded Grader Fish Company, a seafood broker and processor that specialized in local, high-quality salmon and crab. Zeke worked for the family business through high school, unloading the daily catch on the company's dock. After graduating from high school, Zeke took his undergraduate degree at Sonoma State University, served in the U.S. Marine Corps, and graduated from the University of San Francisco's School of Law. He passed the California State Bar in 1975. During his studies, Zeke also managed Ocean Traders Co. in Sausalito, a fish receiving station for his family's seafood processing business. At the same time, massive changes were underway in maritime law and fisheries policy. Congress was deliberating on the details of a 200 nautical mile-wide "economic zone" to preclude overfishing by foreign fleets. This ultimately resulted in Magnuson-Stevens Act. In response to concerns about the implications of the Magnuson Act, a group of West Coast fishermen formed the PCFFA and drafted Zeke as executive director. He served in that position until June, 2015. From the beginning, Zeke demonstrated an almost preternatural aptitude for the persuasion, debate, declaiming, arm-twisting, and cajoling necessary for dealing with policy makers at both the state and federal levels, says Bill Kier, a Marin-based fisheries consultant and one of Zeke's best friends. "One of Zeke's great talents was his ability to size up each day's fish habitat and fishing regulation skirmish and figure out how to pluck out a gain for his fishermen - gains the fishermen never could have afforded through normal pay-to-play lobbying," says Kier. "There's been a lot said over the years about how Zeke's boyhood fish dock / Marine Corps-bred fighting skills served the fisheries, but this other side of him, the t'ai chi ch'uan fisheries warrior, intrigued me the most." Over the years, Kier continued, Zeke helped fishermen define and articulate their positions on a wide range of issues that affect fisheries and fish habitat, including offshore oil and gas development, timber harvesting and water allocation. "His lobbying was largely responsible for the passage of the 1988 Salmon, Steelhead Trout and Anadromous Fisheries Program Act, which called for a conservation plan to double wild salmon numbers," said Kier. "He then used that legislation as a mandate for reforming the federal Central Valley Project. Due to the work of Zeke and his allies, the Central Valley Improvement Act passed in 1992." Along with these two "monument" legislative coups, Zeke also helped modernize the Magnuson-Stevens Act, successfully litigated to accelerate water quality restoration under the Clean Water Act, and helped protect fishing grounds by advocating for effective oil spill prevention and response policies. He received widespread recognition for his work, including the Environmental Hero Award from the National Oceanic and Atmospheric Administration.

But Zeke also realized that fishermen could not achieve their goals on their own. He was a masterful collaborator, forging alliances with environmental groups, land trusts, conservancies – any organization with agendas that dovetailed with the preservation of fish and fishery habitat. "There really was no one else like Zeke," said Carolee Krieger, the executive director of the California Water Impact Network. "He fought for fishermen and fish, and in doing so, he also fought for the protection of our wetlands, estuaries and rivers, and for the equitable distribution of our water. He was a man for all seasons, a man who was always ready with support or advice. He brought us all together, and made all of us stronger." Zeke is survived by his wife, Sausalito attorney Lois A. Prentice; his mother, Geraldine Grader; two sisters, Lindsay Grader and Allison Grader; and a brother, Samuel Grader, also an attorney.

AIFRB Member Becomes Second Vice President of AFS

Jesse Trushenski

See just some of Jesse's research below:

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North American Journal of Aquaculture 77 (2), 160-169

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JT Trushenski, CS Kasper, CC Kohler
North American Journal of Aquaculture 68 (2), 122-140

Fatty acid profile of sunshine bass: I. Profile change is affected by initial composition and differs among tissues
JT Trushenski, HA Lewis, CC Kohler
Lipids 43 (7), 629-641

Effect of replacing dietary fish oil with soybean oil on production performance and fillet lipid and fatty acid composition of juvenile cobia Rachycentron canadum
J Trushenski, M Schwarz, H Lewis, J Laporte, B Delbos, R Takeuchi, ...
Aquaculture Nutrition 17 (2), e437-e447

in public affairs, he early realized the educational value of television and hosted more than 100 television programs. Karl's contagious enthusiasm and seemingly endless energy permeated his active life style. He had a fine sense of humor, and was most generous in helping his many students advance their careers. He had an excellent command of the English language, and was able to impart this ability effectively to students and colleagues alike. His keen, active mind never lacked for useful suggestions in problem solving, a challenge he eagerly sought. Dr. Lagler died of a heart attack in Ann Arbor, Michigan, on August 25, 1985, at the age of 72.

To read more: aifrb.org/founding-fellows

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