



# ONCORHYNCHUS

Newsletter of the Alaska Chapter, American Fisheries Society

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## Marine Debris – More than Meets the Eye (or Sensor)

*Peter Murphy*

Marine debris is a persistent problem that occurs throughout the global marine environment. Evidence of the problem can be seen from the nearest beach to the middle of the largest ocean. Debris can vary from abandoned vessels to nearly invisible, pre-production plastic pellets the size of grains of sand. The first step in understanding and addressing the impacts of marine debris is detection – a task easily accomplished on beaches, but much more difficult in the open ocean. Detecting debris in the ocean requires identifying and applying an approach that combines the correct sensors with the optimal application.

Each type of debris poses a different threat to the health and sustainable use of our oceans. At sea, shipping and navigational safety can be compromised through fouling of propulsion and steering mechanisms. Fish, turtles, and seabirds can ingest debris when attempting to feed. Marine mammals, fish, seabirds, and sea turtles can become entangled in derelict fishing gear. Lost or derelict nets and traps can continue to fish for months or even years after being lost, inducing ongoing mortality to target and non-target stocks through “ghostfishing.” These impacts are not strictly limited to the open ocean, however, as debris that migrates to the nearshore environment can have significant impacts. Nets and traps can smother or scour critical habitat such as reefs and submerged aquatic vegetation. Often, by the time debris is located and the opportunity exists to start removal efforts, the debris has become thoroughly engaged with the habitat. At that point, debris removal poses significant challenges, both in terms of the effort required and in terms of judging how—and whether—to remove the debris without causing more damage than would occur without the removal.

To mitigate these impacts, a key need is the ability to locate and identify debris already in the marine environment and, once identified, remove that debris as quickly as possible. However,



NOAA researchers collect measurements from a retrieved derelict Dungeness crab pot near Petersburg, Alaska. Photo from NOAA Marine Debris Program.

*Continued on next page*

## The President's Corner

Audra Brase

In September I was lucky enough to be able to attend the joint Parent Society and Western Division AFS Meeting in Seattle. As you have likely heard, there were so many sessions and continuing education classes that it was often very difficult to choose among them. I was reminded that



Audra Brase,  
AFS Alaska Chapter President.

we, as Alaskan fisheries biologists, are very lucky because the majority of fish populations that we work with are wild, and not enhanced, stocked, or invasive. This distinction helps explain why we often receive so much national interest in our management and development decisions.

The Seattle meeting also reinforced to me the importance of these get-togethers to our professional development. Being able to interact with fisheries managers, researchers, and scientists from around the United States and Canada is invaluable, and something that very few of us get to experience in our day-to-day jobs. Unfortunately, in today's state of shrinking budgets, the opportunities to travel to these kinds of meetings are becoming fewer and fewer. I met some biologists at the meeting whose agency budgets had gotten so tight that they were forced to travel to the meeting on their own dime. While this is laudable, it should not have to become the norm and I hope that those of us who are budget supervisors can continue to allocate our dwindling resources to encourage professional development opportunities. In addition, once we return from such trips, we need to emphasize to our supervisors how valuable we felt the meeting/conference/training was and that we appreciated the chance we were given to attend.

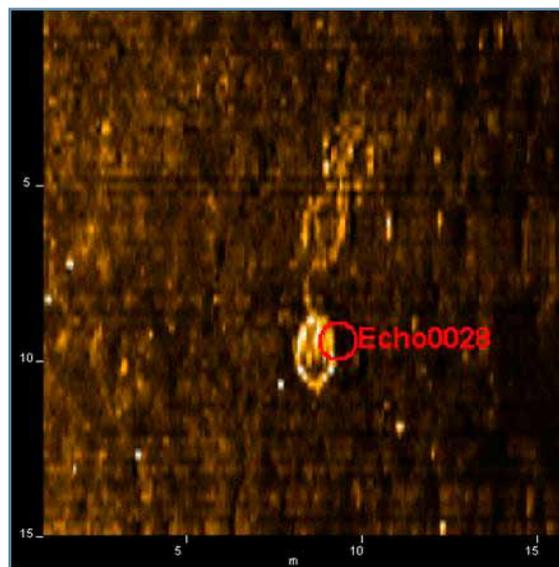
As an aside, a benefit of being the Chapter President is that the Chapter pays for attendance

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## Marine Debris, continued

the nature of the target debris, combined with the inherently variable and sometimes difficult conditions in the marine environment, makes this goal difficult to achieve. Two important benefits counter-balance these challenges: the ability to identify priority debris for removal and the ability to identify and quantify impacts for input to management and policy decisions that can lead to reduction in the introduction of marine debris, as well as aid in its removal. For some forms of debris, detection approaches and the knowledge of impacts are well advanced, whereas for others debris, the process of identifying the optimal detection and mitigation techniques is still in the early stages.

A common form of derelict fishing gear is the derelict trap or pot. When active, pots are typically fished individually or in strings and are left with a buoy to mark their location. This practice leaves a single point of failure for retrieval, making the gear susceptible to prop strikes, buoy failures, or gear movement that makes the gear unrecoverable. An individual commercial fisherman may have hundreds of pots fishing at a time, so even a very small rate of accidental loss can lead to significant amounts of derelict gear in a fishery. The abundance and ghostfishing impacts of lost gear have been the focus of numerous studies across the United States. Through these studies and the lessons learned from



Sonar images reveal line on the bottom next to the lost crab pot. Photo from NOAA Marine Debris Program.

*Continued on next page*

**The President's Corner**, continued

of either the National or Western Division Meeting. In a related note, we are still on the lookout for an energetic individual to take over as Vice-President after the Chapter meeting in November.

This is my last column as your chapter president and I'd like express my appreciation

to the membership for their support and spirit of volunteerism that I have seen and been the recipient of over the past three years. This chapter would not exist without the folks who are willing to step up and lend a hand when needed. Thanks so much and I look forward to seeing you in November. 🙏

**Marine Debris**, continued

them, a common picture of successful techniques for detection and removal has emerged.

For detection, key variables include target size, bottom topography, and turbidity. The majority of trap fisheries use gear that is large enough to be detected by side-scan sonar towed or deployed from a small boat. This technique has proven successful by projects in multiple fisheries, most recently in a 2009–2010 study on derelict pots in the Dungeness crab fishery for Southeast Alaska. However, side-scan operations are complicated in areas with significant bottom relief, such as reef or rocky environments, because the accuracy and quality of sonar data depends on keeping the towed sonar a consistent height above the bottom. In these high-relief areas where sonar isn't as effective, visual detection techniques such as diver-tow or camera sled operations can yield effective survey results provided that turbidity is low.

A key lesson learned in detection has been the difference between the reliable detection and the reliable identification of an individual object. When deploying any detection technique, objects can often be easily distinguished from the surrounding bottom – they can be “detected.” However, being able to identify an object as a target object, whether a crab pot or other item of debris, requires another level of data resolution and ground-truthing that must be integrated into the technology evaluation and planning phase of any project.

When progressing from detection to removal, additional variables become critical. For targeted removal—the removal of a specific target by a diver or remotely operated vehicle (ROV)—the first and most critical of these variables is accurate geo-referencing of the target from the initial survey. For

area-based removal techniques such as grappling, the sensitivity of geo-referencing may be less critical. Another significant variable in removal is depth. Target removal from waters deeper than the safe range of divers requires alternate methods such as the use of ROVs or submersibles, necessitating another level of logistic support. Likewise, shallow grappling can be done from small vessels, whereas grappling in deeper water requires significant ship-based logistics.

Marine debris in the open ocean has become a well-documented phenomenon, with geographic areas of concentration garnering significant attention by scientific agencies as well as citizen science and advocacy groups worldwide. These spatial concentrations, commonly dubbed “garbage patches,” are associated with oceanographic features, such as gyres and eddies, that collect and retain marine debris; concentrations also illustrate the challenge of detecting debris at sea. While hard data is limited, observations have shown that a significant portion of debris in these patches consists of plastic pieces of various sizes. When a small size, many of these plastic pieces, even when at the surface, are not readily detectable by remote sensing equipment. Additionally, debris is frequently suspended in the water column, making detection difficult, even from close visual range. Taken together, this makes remote sensing surveys for small debris impractical as an initial goal using existing technologies.

Derelict fishing gear—nets, floats, and line that have been lost or disposed of improperly at sea—present a different set of challenges and opportunities for detection and removal. For some time, numerous groups have been working

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## Marine Debris, continued

to identify needs, gaps and capabilities.

The first need is an understanding of the “lifecycles and behaviors” of debris in the marine environment. To develop sensors that are effective in detecting marine debris, it is critical to understand the “target” that nets, lines, and other debris provide. The set of “target” attributes includes size, color, material, dimensions, and mesh size. Coupled with these measurable attributes, there is the need for an improved understanding of how nets behave throughout their degradation timeline, including the impact that buoyancy and shape changes have to the profile that nets present to oceanographic conditions such as wind and current.

This profile will be instrumental in working to meet another identified need: the ability to model derelict gear movement at sea. This modeling will allow the marine debris community to both predict and trace debris accumulations. Given the huge geographic area involved in at-sea detection, an ability to focus debris detection and removal efforts in areas likely to contain higher concentrations would increase effectiveness markedly.

Marine debris remains a pervasive problem in the global marine environment. In order to understand and quantify debris impacts and remove debris from the marine environment, we first must be able to reliably detect the debris. Debris detection will require ongoing collaboration and coordination among experts across multiple fields. The success of research on derelict gear in benthic trap fisheries demonstrates the benefits of collaboration in identifying the optimal approach not only to detect debris, but also to remove debris and mitigate its impacts. While the ability to detect derelict fishing gear in pelagic environments is less advanced, a similar strategic and collaborative approach can serve as a model to tackle this important challenge.

*Peter Murphy is the Alaska Regional Coordinator for the NOAA Marine Debris Program, a part of the National Ocean Service. Peter works on debris issues and projects throughout Alaska and is based out of NOS offices in Seattle, WA.*



*Oceanographic features such as currents, eddies and gyres create areas of increased debris concentrations. Here, the major “patches” can be seen within the larger convergence zone. Photo from NOAA Marine Debris Program.*

## Marine Debris Funding

The NOAA Marine Debris Program, authorized in the Marine Debris Research, Prevention, and Reduction Act, provides funding to catalyze locally driven, community-based marine debris prevention, assessment, and removal projects that benefit coastal habitats, waterways, and NOAA trust resources. Funding comes through the NOAA Marine Debris Program as appropriations to the Office of Response and Restoration, National Ocean Service. Funding is partly administered through a grant competition with the NOAA Restoration Center’s Community-based Restoration Program. Approved projects have strong on-the-ground habitat components involving removal of marine debris and derelict fishing gear, as well as activities that provide social benefits for people and their communities, in addition to long-term ecological habitat improvements for NOAA trust resources. Through this solicitation NOAA identifies marine debris removal projects, strengthens the development and implementation of habitat restoration through community-based marine debris removal, and fosters awareness of the effects of marine debris on living marine resource habitats. Funding of up to \$2,000,000 is expected to be available for Community-based Marine Debris Removal Project Grants in FY2012. Typical awards will range from \$15,000 to \$150,000. For more information, contact Peter Murphy, NOAA Marine Debris Program ([peter.murphy@noaa.gov](mailto:peter.murphy@noaa.gov)).

## 38th Annual Meeting of the Alaska Chapter of the American Fisheries Society “Fisheries in Today’s Alaska: Integrating Fish, Habitat, and People”

*Trent Sutton*

The 2011 Alaska Chapter Meeting of the American Fisheries Society will be held in Girdwood, Alaska, at the Alyeska Resort from November 14-18. The theme of this year’s meeting is “Fisheries in Today’s Alaska: Integrating Fish, Habitat, and People.” The focus of this theme will be on the three primary components of fisheries science and their interaction in shaping how we understand, conserve, and manage fisheries resources in both freshwater and marine ecosystems.

Keynote speakers for the meeting include Dr. James Balsiger (Regional Administrator for NOAA Fisheries in Alaska), Mr. John O. Mark (President, Coastal Villages Region Fund), and Mr. Randall Bates (Director of Habitat Division, Alaska Department of Fish and Game). Their presentations will take place during the plenary session to be held during Wednesday morning, November 16. All three presenters will address the meeting’s theme from the perspective of the agency/organization that they represent.

The meeting theme will be evident throughout the broad array of topics covered during the 12 paper sessions and a poster session. Concurrent presentation sessions will take place during Wednesday afternoon (November 16), all day Thursday (November 17), and Friday morning (November 18). The poster session will occur during the social on Wednesday evening. The 12 sessions, including each general topic, are listed below (detailed information on each session can be found on the webpage at <http://www.afs-alaska.org/annual-meetings/2011-2>):

- The Whole Picture: Tying Habitat to Ecosystem Processes and Fisheries Health
- Genetics, Genomics, and the Sustainability of Alaska’s Fish Resources
- Fisheries Education and Outreach: Reaching out to Youth in Alaska and Reeling in Fish Biologists of the Future
- Cross Connection: Adapting and Integrating Principles of Management and Conservation
- Sustainable Fisheries: Utilization, Economics, and Governance
- Freshwater Ecology: Describing the “Cogs and Wheels” of Freshwater Fish Ecosystems
- Marine Fisheries Ecology
- Fisheries Stock Assessment
- Spatial Dynamics and Analyses in Fisheries
- Marine Invertebrates in Alaska
- Working With Subsistence Communities: The Partners for Fisheries Monitoring Program
- Herring Research and Management

Four continuing education workshops will be held on the first two days of the meeting (November 14 and 15) and will include the following four topics: (1) using sonar technology in fisheries; (2) microanalyses of fish otoliths; (3) professional development for fisheries scientists; and (4) analyzing ecological data using generalized mixed effects models. A detailed description of the continuing education courses and information on how to register for them can be found on the webpage at <http://www.afs-alaska.org/annual-meetings/2011-2>.

Wednesday features a catered Student-Mentor Luncheon, limited to the first 35 students and 15 mentors to sign up. If you are a fisheries professional, please consider attending and giving students your insights into post-college opportunities. For individuals registered for the meeting, but not participating in the Student-Mentor or Past President’s Luncheon’s on Wednesday, a boxed lunch will be provided. A boxed lunch will also be provided for all meeting registrant’s on Thursday.

Meeting socials include the “Welcome to Alyeska” Social on Tuesday evening to kick off the meeting. Wednesday evening’s social will be held in conjunction with the poster session. The Chapter business meeting will occur Thursday afternoon. The final social will be the banquet on Thursday evening which will feature the live auction and entertainment provided by Hobo Jim. The meeting will wrap up at noon on Friday with the student awards presentations. ?



*Spring 2011 AFS Student Symposium winners, Juneau (from left): Joel Webb (1st Place tie), Sean Larson (1st place tie), Courtney Lyons (3rd Place). Photo by Rachael Blevins.*

## Student Subunit Happenings

*Emily Lescak, Student Subunit Representative*

Three students from Anchorage attended the AFS society meeting in Seattle. Vanessa von Biela presented “Terrestrial and marine correlates to black rockfish (*Sebastes melanops*) growth in the California and Alaska Coastal Currents.” Emily Lescak received a Wright Award from the genetics section to defray her travel costs.

Several AFS Alaska Chapter student members from the School of Fisheries and Ocean Sciences (SFOS) attended the annual meeting of the American Statistical Association in Juneau during August 29-31. The meeting focus was a shortcourse taught by Dr. Margaret Short of UAF. Scholarships to attend the shortcourse/meeting were awarded to SFOS students Katie Palof, Jonathan Richar, Tadayasu Uchiyama, Katharine Miller, Elizabeth Siddon, Marcus Gho, Julie Nielsen, Sarah Miller, and Rosemary Walling, whereas agency funding provided for attendance by SFOS students Joel Webb and Sarah Power. Students interested in attending next year’s meeting (location to be determined) should contact Kanapathi Thiru ([afkt@uaa.alaska.edu](mailto:afkt@uaa.alaska.edu)). 🐟



*Numerous SFOS students attended the ASA shortcourse meeting at Juneau in August. Photo by Allen Bingham.*

## 2012 Call for Chapter Award Nominations

*Theresa Tanner and Kenneth Gates*

The Alaska Chapter is currently soliciting nominations for the Meritorious Service Award (MSA), the Chapter Service Award (CSA), the Almost Darwin Award, and the Wally Noerenberg Award for Fishery Excellence. I encourage all members to consider deserving individuals and to submit nominations for these awards. Please use the form at <http://www.afs-alaska.org/awards-scholarships> to make your nominations. Award presentations from this call for nominations will occur at the 2012 Annual Meeting. **NOMINATIONS MUST BE SUBMITTED BY JANUARY 31, 2012.**

Nominations for the MSA can be based on an outstanding contribution in any area of Alaska fisheries, including research, management, education, planning, industry, and policy development. Nominations do not have to come from AFS members, nor do nominees need to be active members. The contribution or accomplishment of the candidate must be recent and not the result of many years of effort; recognition of career-long contributions is more appropriate for the Wally Noerenberg Award. The Awards Committee will select winners based on strength of the nomination and the accomplishment.

The CSA was established to award outstanding service to the Alaska Chapter of the American Fisheries Society. These candidates should have been involved in some or all of the following activities: active participation in standing or ad-hoc committees; made important contributions to advance the current objectives, long-term goals or stature of the Chapter and fisheries professionals; contributed a significant amount of time to Chapter activities; improved public awareness of the Alaska Chapter and Chapter activities; encouraged development of students as fisheries professionals through recruitment and involvement as Chapter members; and recruited fisheries professionals as Chapter members. Submit MSA and CSA award nominations and letters of support for nominations to Theresa Tanner, USFWS, 605 W 4th Ave., Rm G-61; Anchorage, 99501, 271-1799, [theresa\\_tanner@fws.gov](mailto:theresa_tanner@fws.gov).

The Almost Darwin Award recognizes the most humorous and outrageous fisheries faux pas of any fisheries professional. The nominees must have committed the faux pas within the last calendar year. Please include a photo of proof along with the story. Submit award nomination stories and photos to Theresa Tanner at the above address.

The Wally Noerenberg Award for Fishery Excellence, the highest award of the Alaska Chapter, is bestowed as a special honor on individuals who have made great and outstanding contributions to Alaska fisheries. This award was established in 1981 by resolution of the membership. The membership has also set, by resolution, specific guidelines for the Wally Noerenberg Award Committee. Nominee contributions may include scientific research; technological development; species and habitat management; innovations in harvesting, processing, or marketing; academic and fishery education; or involvement in national and international affairs affecting Alaska fisheries. Submit Wally Noerenberg Award nominations and letters of support for nominations to Ken Gates, USFWS, Kenai Fish and Wildlife Field Office, 43655 K-Beach Road, Soldotna, AK 99669, 260-0126, [Kenneth\\_gates@fws.gov](mailto:Kenneth_gates@fws.gov).

Rewarding excellence is an enjoyable but challenging task and finding judges is a challenge too. If you would like to help out, the Chapter is soliciting members for the Awards Committee. If you are interested in being a part of this committee please contact Theresa Tanner at [theresa\\_tanner@fws.gov](mailto:theresa_tanner@fws.gov) or 271-1799.

The application form for 2012 Chapter awards is available online via the "Awards" link at: <http://www.afs-alaska.org/awards-scholarships>. ☺



**AFS memberships  
may be renewed online**

<http://www.fisheries.org/afs/membership>

## Call for Nominations for Alaska Chapter Vice President and Secretary

The Alaska Chapter of the American Fisheries Society (AFS) is seeking a Vice President candidate for 2012. To become Chapter President, you are first elected Vice President. This will begin a 4-year commitment in which, as Vice President, you will chair the Membership Committee and assist the President-Elect in organizing the Annual Chapter Meeting. The following year you will advance to President-Elect where you will plan and chair the Program Committee for the annual Chapter meeting. During your third year, you will become President where you will chair the Executive Committee (ExCom) and preside at all meetings, represent the Chapter to the Western Division and Parent Society, and write a quarterly "President's Corner" for the *Oncorhynchus*. As Chapter President you will also get to travel to either a Western Division or Parent Society meeting. Finally, after gaining three years of wisdom (and this is a terrific learning experience), you will become Past President. The Past President is responsible for updating the AK Chapter Procedure Manual and, if needed, the Chapter Bylaws. Overall, the Past President is the source of "wisdom" to the rest of the ExCom. As a final duty, the Past President will preside over the Past Presidents Luncheon during the annual AK Chapter meeting. It is hard to believe that is actually a 4-year process because the time goes quickly!

The most time-consuming year of this 4-year cycle is as President-Elect when you are planning the annual Chapter meeting. The incoming Vice President for 2012 will coordinate the 2013 meeting in Southeast Alaska. However, you wouldn't be alone—far from it—because the rest of the ExCom will be there to provide LOTS of support! This system allows a person to learn about chairing meetings, organizational and leadership skills, and planning a conference before actually doing it. Every year is a challenge and you get to work with a great group of people in a very positive atmosphere, network with other Divisions and Chapters, get to know the Parent Society leadership, and receive numerous pats on the back.

In addition, we will be looking for a new AK Chapter Secretary. This two-year position serves as a voting member of the Executive Committee. The main duties of the Chapter Secretary are to record the minutes of the annual business meeting and submit a copy for proofreading to the ExCom after said meeting. In addition the secretary compiles minutes of the monthly to bi-monthly ExCom teleconference calls. The secretary maintains records of activities, minutes, and other aspects of the Chapter, and forwards these records to the incoming Secretary. This is also a very rewarding position as you will learn all about the interworkings of the Alaska Chapter, Western Division, and Parent Society. In addition, as a voting member, you will play an active role in decisions made by the ExCom.

If you are interested in running for Vice President or Secretary for 2012, or have questions about these two positions, please contact Lisa Stuby ([lisa.stuby@alaska.gov](mailto:lisa.stuby@alaska.gov); Ph: 459-7202).

## Continuing Education – Alaska Chapter Annual Conference

Tammy Hoem Neher

Don't forget to sign up for a budget-friendly, continuing education workshop or two by October 17 to receive early registration discounts!! To promote your professional development, we have four great workshops over November 14 and 15 to choose from: 1) Using Sonar Technology for Fisheries Counts; 2) Microanalyses of Fish Otoliths; 3) Professional Development for Fisheries scientists; and 4) Beyond Linear Modeling, Mixed Methods Modeling. Courses are half, full, and two-day formats with limited seating, so register now to reserve your spot! Detailed descriptions can be found on the Alaska Chapter webpage at [http://www.afs-alaska.org/annual-](http://www.afs-alaska.org/annual-meetings/2011-2/continuing-education-courses)

[meetings/2011-2/continuing-education-courses](http://www.afs-alaska.org/annual-meetings/2011-2/continuing-education-courses). Please contact Tammy Hoem Neher if you have questions: (907) 226-4668 or [tdhoem@alaska.edu](mailto:tdhoem@alaska.edu). See you in November at Girdwood!

### ONCORHYNCHUS

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Deadline for materials for the winter issue of *Oncorhynchus* is December 10.

## New Alaska Chapter Website

After several months of working with contractors, the new and improved Alaska Chapter website is up and running! Please visit <http://www.afs-alaska.org/> to check it out (this is a new domain name too, so you might want to change any bookmarks you had to

the old site). The website is a work in progress and we still have a fair amount of archival material to link to the new site, but it is time to make it live and start getting feedback from the membership. Thanks in advance for any comments you may have. ☺

## Molly Ahlgren Scholarship

The Molly Ahlgren Scholarship provides \$2,000 annually to a worthy undergraduate student entering their senior year of studies with the intent of earning a baccalaureate degree in fisheries or aquatic science at the University of Alaska (any branch) or Alaska Pacific University. All travel and meeting registration expenses will be paid for attendance of the annual AFS Alaska Chapter Conference.

Applicants need to complete and submit an application and will be evaluated on their work

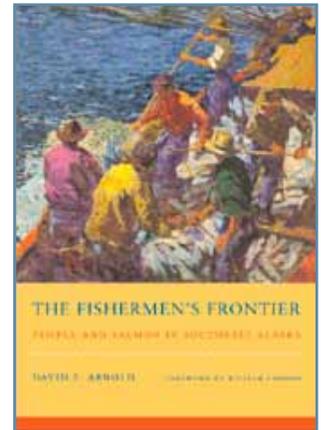
and/or educational experiences and interest in the fields of fisheries and aquatic science, interest in professional advancement, and reason(s) for financial need.

Applications for the 2011 Molly Ahlgren Scholarship are due October 21 (applications must be received by this date), the application form is available the Chapter website at <http://www.afs-alaska.org/> or by contacting Lee Ann Gardner (ph:688-1400, [rwjconsulting@ak.net](mailto:rwjconsulting@ak.net)). ☺

## New Books

The Fishermen's Frontier: People and Salmon in Southeast Alaska. by David F. Arnold. University of Washington Press, Seattle. 2008.

Arnold integrates two kinds of history: environmental (negative effects on non-humans/the environment) and labor/social (negative effects of worker exploitation). He is particularly concerned "about loss of human diversity as... occupations are pulverized in the churning gears of globalization." His first four chapters recount history through the 1950s: (1) the Tlingit and Haida system of salmon property rights sustained greater populations than anywhere else in North America (postglacial salmon likely evolved in the face of efficient harvesting); (2) industrial transformation when the Tlingit supplied fish to the Russian colony at Sitka and a salmon economy persisted through American exploitation in the early 1900s; (3) Federal oversight when scientific management conflicted with the political/market power of the packing companies and fish traps; and (4) collaborative, but often conflicted, salmon fishing by various ethnic groups and Native Alaskans—in allegiances against fish traps, packing companies, and bureaucrats. A flawed fifth chapter addresses statehood, ANCSA, ANILCA, Limited Entry, and effects of salmon farms on global markets. Arnold views Limited Entry as an unnecessary fix to a tragedy of the commons--destroying "fisherfolk" while trying to protect them from economic and ecological cycles. But there is no evidence that Arnold studied the history of the Entry Commission; and no credit is given for the persistence of our small-boat fishery through the 1990s market collapse and the collapse of the Japanese bubble economy. The increased value through new products and marketing of wild salmon are ignored, and Arnold neglects the salmon enhancement hatchery program and the Private Non-Profit corporations. The PNPs are a uniquely Alaskan, regionally replicated, social/economic experiment that, despite faults, has brought a measure of fishery stability by concentrating a portion of the catch (cost recovery) and providing harvest in years when wild stocks cannot. Despite rancorous struggles, the PNPs have brought fishery participants together in common cause, and provide a rich part of the social history of the fishery in the late 20th century. Despite these omissions and minor mistakes (e.g., the Endangered Species Act is not administered by the US EPA and walrus and raccoons don't live in Southeast Alaska), Arnold's book is a great account of the early history of the Southeast salmon fishery and a challenging critique of modern management. ☺



## Meetings and Events

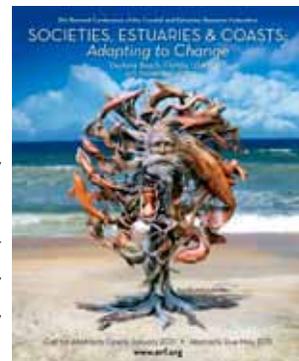
### North Pacific Marine Science Organization (PICES)

October 14–23, 2011. The meeting in Khabarovsk, Russia will focus on structure and changes in marine ecosystems. For more information, see <http://www.pices.int/meetings/annual/PICES-2011/2011-background.aspx>.



### Coastal and Estuarine Research Federation 2011 Conference

November 6–11, 2011: This meeting, “Societies, Estuaries and Coasts: Adapting to Change,” will be held in Daytona Beach, FL. For more information, please visit <http://www.sgmeet.com/cerf2011/>.



### 14th World Lakes Conference

October 31–November 4, 2011. This meeting, “Lakes, Rivers, Groundwater, and Coastal Areas: Understanding Linkages,” will be held in Austin, TX. For more information, please visit <http://www.wlc14.org/>.



### Alaska Marine Science Symposium

January 16–20, 2012: This meeting will be held in Anchorage, AK. For more information, please visit <http://www.alaskamarinescience.org/>.



### 38th Annual Meeting of the American Fisheries Society Alaska Chapter

November 14–18, 2011: This meeting will be held in Girdwood, AK. The meeting chair and program contact is Trent Sutton ([tmsutton@alaska.edu](mailto:tmsutton@alaska.edu)).



### 25th Northeast Pacific Pink & Chum Workshop

This workshop will be held February 13–15, 2012 at Centennial Hall in Juneau, Alaska. For more information, please visit <http://pinkandchum.psc.org/>.



## 2011 Alaska Chapter Officers

#### President

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#### Student Subunit Representative

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Feel free to contact the Executive Committee members