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Aerial photo of the Kolpakova River on the Kamchatka Peninsula. The rivers of Kamchatka boast some of the greatest biocomplexity and salmon productivity on Earth.

International Salmon Conservation: Alaska, Russia, and Beyond

Danielle Smith

Two coasts of the Bering Sea

From the floodplains of Alaska's Kwethluk River to the shores of Russia's Kurilskoye Lake, salmon unite the ecosystems, human communities, and economies of the North Pacific.

Even with prices at all-time lows due to competition with farmed salmon, the salmon industry is still worth \$130 million per year to Alaska (Gilbertson 2003). It holds the high distinction of being the first U.S. fishery ever certified by the Marine Stewardship Council. Alaska's rivers are among the world's most prolific: Bristol Bay alone provides spawning grounds for approximately half of the global population of sockeye salmon (*Oncorhynchus nerka*).



*The rare sea-run, or Sakhalin, taimen (*Parahucho perryi*) is believed to be one of the ancestors of modern salmon.*

Much of Alaska's success stems from its largely pristine and productive ecosystems. The braided, unconstrained deltas of the Copper, Kwethluk, and many other Alaskan rivers are signs of the habitat and ecosystem processes that have supported salmon for millennia. With a small human population and few impacts from development, Alaska presents a distinct contrast to the contiguous United States, where forest practices, urbanization and development, mining, hydropower, poor hatchery practices, and over-harvest in tandem with climate variability, have decimated salmon populations through a "thousand cuts". Hundreds of millions of dollars are spent annually on salmon recovery in the Pacific Northwest, and yet current wild salmon run sizes are only 1-10% of historical levels in places like the Oregon Coast (Rahr and Augerot 2005).

Alaskans are rightly proud of their dramatically different history, but they are not alone. Across the Bering Strait, only 58 miles away, lies another of the world's great wildernesses: the Russian Far East (RFE). The RFE is home to one-third of the world's wild Pacific salmon, including most of the world's wild pink (*O. gorbuscha*) and chum (*O. keta*). The rivers of

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The President's Column

Scott Maclean

Spring was a time when the song of the Red-wing Blackbird coincided with the return of speckled sea-run cutthroat trout to a stream near my childhood home in Washington State. My friends and I would race to the stream after school to get the best spot along our favorite fishing hole. We often came home with one or two of the largest trout caught that day. However, fewer trout were caught over the years and I speculated why. Your first thought might be my friends and I overfished the small population of cutthroat trout, which are susceptible to fishing pressure.

Looking back I realize it wasn't any one stressor that diminished the numbers of trout, but a number of factors. First, salmon runs declined over the years. All the mysterious ways in which salmon carcasses became the trout's breakfast, lunch, and dinner were not then, and are still not, obvious. Farmers and other land owners along the lower reaches of the stream cut trees on the stream banks, dug the channel deeper for flood control, withdrew water for irrigation, and installed culverts. Along the upper reaches, dams were built for domestic waterfowl ponds and culverts were installed under driveways and roads. I find it amazing that the cutthroat trout and remaining salmon held on so long. In spite of their tenacity, one event stands out as perhaps the last straw. The entire upper watershed, including the riparian zone, was logged. Without the riparian zone intact, gravels became clogged with sediment, perched culverts and dams prevented fish passage, stream flows were altered and exotic plants invaded the stream and finally, the trout vanished. Unfortunately, this scenario has been repeated throughout the cutthroat trout's range.

As an active member of the American Fisheries Society (AFS), I now have a better understanding and appreciation for the life history and habitat requirements of these amazing and often underappreciated fish. I recently learned even more by watching: "Rising from the Shadows: The Return of the Cutthroat Trout," a



Scott Maclean, AFS
Alaska Chapter
President

video produced by the Western Division of AFS. I also now recognize the need to educate the public, land managers and policy makers about the importance of protecting fish habitat. The mission of AFS is to improve the conservation and sustainability of fishery resources and aquatic ecosystems by advancing fisheries and aquatic science and promoting the development of fisheries professionals. This clearly includes promoting education in fisheries science. Two opportunities to do this are currently knocking on our Chapter's door. One is the development of an educational brochure on the stewardship of riparian habitat, and the other is the partial sponsorship of teachers attending an educational fisheries workshop. These are ways our Chapter can share our knowledge with others. The Alaska Chapter has a lot to offer by educating not only our members but also the general public. I firmly believe that none of the property owners along the trout stream of my youth wanted to see the fish disappear.

Alaska contains more pristine fish habitat than anywhere else in the United States. However, history often repeats itself. Will this habitat remain intact? What risks are you willing to take? More importantly, what risks are people outside the fisheries community willing to take? AFS cannot answer these questions, but I know we are uniquely positioned to provide direction in protecting Alaska's fishery resources and aquatic ecosystems. The lower 48 states don't have this luxury. Natural habitat for salmon and other wildlife there have been lost forever, or the costs of recovering them are now prohibitive. I encourage AFS members to become involved by providing policy makers with the technical information essential to wise decisions on the protection and conservation of Alaska's world class fishery resources. AFS provides an avenue for members to pool technical information gleaned from many years as fishery professionals to help guide decision makers and policy makers. Committee participation is one example of how you can contribute to fulfilling the mission of AFS. Please contact me if you have ideas or would like to participate in making a difference. 🗨️

Western Division Positions Available

The Western Division of AFS is seeking a webmaster and newsletter editor. Mary Whalen, the current webmaster has resigned. If you have any skills with websites, or want to develop them, the Division needs you. The Division also desperately needs a newsletter editor. The newsletter has gone electronic which makes the job much easier, less expensive, and more creative. Both of these critical positions are excellent ways for building your resume, communicating your ideas, and contributing to the Division.

If you want to know what is involved with being a webmaster or editor, please contact Mary Whalen at: mary_whalen@usgs.gov, as soon as possible. The Western Division is losing its ability to communicate with its members at a very critical time. 🗨️

ONCORHYNCHUS

Oncorhynchus is the quarterly newsletter of the Alaska Chapter of the American Fisheries Society. Material in this newsletter may be reprinted from *AFS Diary* and *Western Division*.

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Deadline for materials for the summer issue of *Oncorhynchus* is June 10.

Alaska Chapter's Internet Home Page Address

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First Call for Papers, Alaska Chapter Annual Conference:

Partnering with Change, 21st Century Aquatic Ecology in Alaska

Jamal Moss, Ray Hander, and Lisa Stuby

Multidisciplinary research and interagency collaborations have become increasingly common while agencies are struggling to implement ecosystem-based natural resource management in recent years. In keeping with these trends, the 33rd annual meeting of the American Fisheries Society Alaska Chapter will take the big picture approach to fisheries management and research. Thus, we are pleased to announce that “Partnering with Change, 21st Century Aquatic Ecology in Alaska” will be held at the Wedgewood Resort in Fairbanks from November 13 – 16, 2006. Ronnie Greer, a renowned char biologist from Scotland will be our banquet speaker. Ronnie is both captivating and entertaining, and will discuss environmental history in Scotland and his research on Arctic char.

Program

Ecosystem management

Chair: Terry Quinn, University of Alaska Fairbanks, Professor of Fisheries and Ocean Sciences; *Terry.Quinn@uaf.edu*, (907) 796-2051

Estuarine ecology

Chair: Nicola Hillgruber, University of Alaska Fairbanks, Professor of Fisheries and Ocean Sciences; *nhillgruber@uaf.edu*, (907) 796-6288

Behavioral ecology

Chair: Nicholas Hughes, University of Alaska Fairbanks, Professor of Fisheries and Ocean Sciences; *ffnfh@uaf.edu*, (907) 474-7177

Marine ecology

Chair: Kyle Hebert, Alaska Department of Fish and Game, Region I Marine Fisheries Supervisor; *kyle_hebert@fishgame.state.ak.us*, (907) 465-4228

Commercial shellfish fisheries

Chair: Gretchen Bishop, Alaska Department of Fish and Game, Region I Shellfish Project Leader; *gretchen_bishop@fishgame.state.ak.us*, (907) 465-4228

Aquatic education

Chairs: Bonita Nelson, Auke Bay Laboratory, Fisheries Scientist; *Bonita.Nelson@noaa.gov*, (907) 789-6071 and

Erik Anderson, Alaska Department of Fish and Game, Education Associate; *erik_anderson@fishgame.state.ak.us*, (907) 459-7350

Aquatic and terrestrial interactions

Chair: Tom Paragi, Alaska Department of Fish and Game, Wildlife Biologist; *tom_paragi@fishgame.state.ak.us*, (907) 459-7327.

Fisheries Communication and Education Committee Report

Laurel Devaney and Mike McDougall

The goal of this committee is to increase the knowledge and skills of AFS members so that they can develop and implement outreach and education programs about their projects and Alaska’s fisheries. The ultimate goal is to use our communication skills to develop respect and stewardship of our unique fisheries and aquatic resources among all Alaskans. Mike McDougall, a fisheries biologist with the Yukon River Drainage Fisheries Association, and Laurel Devaney, the education coordinator with the Fairbanks Fish & Wildlife Field Office, serve as the Education Committee co-chairs.

2005 Accomplishments

In the past year, our committee updated the AFS Directory of Fishery Educators, and worked with Allen Bingham to get this document posted on the AFS web site.

Laurel Devaney also attended a number of the

A session focused on habitat issues is also tentatively scheduled, and we are still searching for individuals interested in leading sessions on genetics and fisheries management issues. We are also looking for a poster session chair. If you are interested in presenting at a particular session, contact that session chair. Detailed descriptions of each session and abstract submission deadlines will be published in the summer issue of *Oncorhynchus*. Abstract formatting guidelines are available on the Chapter website at: <http://www.fisheries.org/afs-ak/meetings/2006/meet2006.htm>. If you have ideas for continuing education courses or would like to lead a session, or suggest session topics, please contact Jamal at: *Jamal.Moss@noaa.gov*.

Continuing education

Risk Management for Non-profit Corporations

Shrinking budgets continue to make volunteer labor an important facet of non-profit organizations. However, utilizing volunteers is not without risks, so this year’s continuing education course will focus on “Risk Management for Non-profit Corporations.” The course will be instructed by Jim Dewitt of Guess and Rudd P.C. law firm on Monday, November 13.

Technical Writing Workshop

Instructor Judd Monroe will offer the ever-popular technical writing workshop the week prior to the annual Alaska Chapter conference in either Anchorage or Fairbanks. Workshop informational details will be provided in the summer issue of *Oncorhynchus* for more information contact Continuing Education Committee Chair Toshihide ‘Hamachan’ Hamazaki at *hamachan_hamazaki@fishgame.state.ak.us*, or (907) 267-2158. ☺

education and outreach sessions at the national AFS conference in Anchorage to gain a wider perspective about education efforts among the other state chapters. An Alaska Chapter Communication and Education Committee meeting was not held at the conference last year. Instead, the committee co-chairs plan to survey Alaska AFS members in the coming months to gain input on fisheries education and communication needs that can be met by this group. We will especially focus on possible topics to cover in a pre-conference workshop next fall, and the types of educational materials useful to post on the education committee section of the Alaska Chapter web site.

If you have any questions or suggestions for the Education Committee, please feel free to contact either Laurel Devaney at: *laurel_devaney@fws.gov*, (907) 456 0558 or Mike McDougall at: *yrdfa@mosquitonet.com*, (907) 479-3658. ☺

Call for Award Nominations

Cheryl Dion

The Chapter is soliciting nominations for three awards, the Meritorious Service Award (MSA), the Chapter Service Award (CSA), and the Wally Noerenberg Award for Fishery Excellence. I encourage all members to consider nominating deserving individuals. Please make your nominations by July 31, 2006 using the form available on the chapter website. Award presentations will occur at the 2006 Annual Chapter Meeting.

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; the recognition of career-long contributions is more appropriate for the Wally Noerenberg Award. The Awards Committee will select winners based on the strength of the nomination and the level of the accomplishment.

The CSA was established to award outstanding service to the Alaska Chapter of the American Fisheries Society. Candidates for this award should have been involved in some or all of the following activities:

- actively participated 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 significant time to Chapter activities;
- improved public awareness of the Alaska Chapter and its activities;
- encouraged development of students as fisheries professionals through recruitment to, and involvement with the Chapter, and
- recruited fisheries professionals to the Chapter.

For MSA and CSA award nominations, submit letters of support, nomination forms and any other supporting documentation to Cheryl Dion.

Student Writing Contest

The American Fisheries Society holds an annual student writing contest. The goal of the contest is to recognize students for excellence in the communication of fisheries research to the general public. Undergraduate and graduate students are asked to submit a 500- to 700-word article explaining their own research or a research project in their lab or school. The article must be written in a language understandable to the general public. The winning paper and the runner-up will be published in Fisheries. For rules and further description, visit the website at: http://www.fisheries.org/html/Professional_Development/Awards/awards_Society_2006.shtml or contact: James R. Jackson; 900 Shackelton Point Rd; Bridgeport, NY 13030; (315) 633-9243; jrj26@cornell.edu. The deadline for submissions is May 5, 2006.

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 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 Alaskan fisheries. For Wally Noerenberg Award nominations, submit letters of support, nomination forms, current curriculum vitae of the nominee, and any other supporting documentation to: Doug Palmer, USFWS, P.O. Box 1670, Kenai 99611, (907) 262-9863, Douglas_Palmer@fws.gov.

We are also accepting nominations for a new award, the “Almost Darwin” Award. This award recognizes the most humorous and outrageous fisheries *faux pas* of any fisheries professional. The nominees must have committed the *faux pas* within the 2005 calendar year. Please include a photo of proof along with the story. Included at the top of page 5 are a few examples highlighting our careful planning of field sites. Submit award nomination stories and photos to Cheryl Dion.

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: Cheryl Dion, USFWS; P.O. Box 277, King Salmon 99613, (907) 246-1231, cheryl_dion@fws.gov.

Cultural Diversity Travel Award

The Alaska Chapter of the American Fisheries Society is pleased to announce the availability of a monetary award for an Alaska Native or other minority person, to cover travel expenses to attend the 2006 AFS Alaska Chapter Annual Conference. Applicants must be either an Alaskan Native or another minority (a woman, black, Hispanic, or other ethnic minority) and should either hold an entry level position or be a student in the field of fisheries science or a related discipline. Applications are available on the web at <http://www.fisheries.org/afs-ak>, or for further information, contact the Cultural Diversity Committee Co-chairs, Jerry Berg at: jerry_berg@fws.gov or (907) 786-3519, or Lisa Stuby at: lisa_stuby@fishgame.state.ak.us or (907) 459-7202. Applications must be received by October 13, 2006.

Errata

In the winter edition of *Oncorhynchus* it was reported that the AFS Best Student Poster recipient at the 24th Annual Meeting of the American Fisheries Society was Cari-Ann Hayer for: “Effects of gravel mining on detection probabilities for selected Mobile River Basin fishes.” The correct spelling is Cari-Ann Hayer.



This is a great spot for the camp....the water never gets this high!



We need to put the weather port hut close to the river because our video cable is not long enough.

Mixing Zone Update

Environmental Concerns Committee

A mixing zone is an area in a water body where pollution levels exceed state water quality standards. In January of 2006, the Alaska Chapter of the American Fisheries Society went on record with a letter in opposition to allowing mixing zones in freshwater fish spawning habitats. This was in response to proposed regulatory amendments by the Department of Environmental Conservation (DEC). The letter has been posted on the Chapter website, as mentioned in the last issue of *Oncorhynchus*.

Despite overwhelming opposition from AFS, other organizations and the general public, most of the changes proposed by DEC were adopted, allowing exemptions to the State's total prohibition on mixing zones in select freshwater fish habitats. The full regulatory changes can be viewed at: http://www.dec.state.ak.us/water/wqsar/trireview/pdfs/Mixing_Zones_with_TitlePage1.pdf.

Although the prohibition on authorization of mixing zones in anadromous Pacific salmon spawning areas remains in effect, mixing zones can now be permitted in landlocked salmon and other freshwater fish habitats if certain stipulations are met. The change of greatest concern to AFS is that the mixing zone permit applicant must both:

- demonstrate that fish and their habitats will not be harmed, and
- monitor the mixing zones to demonstrate compliance with DEC permits.

This creates an obvious conflict of interest and should be revised. The end result is that mixing zones that may adversely impact fish habitat can now be permitted by DEC if the Alaska Department of Natural Resources or the Alaska Department of Fish and Game approve a mitigation plan.

Mitigation's difficulty and likelihood of failure is

repeatedly demonstrated in the peer-reviewed literature. Aquatic ecosystems are nefariously difficult to manage owing to their three-dimensional nature, remoteness and vastness. The level of uncertainty about the effectiveness of mitigation alternatives and management strategies is still very high and much research is needed to improve their predictive capacity. Combine this with the fact that in Alaska, we still lack comprehensive fisheries information on about 90% of our watersheds. It is difficult to believe that Alaska will be different and that an effective mitigation or compensation system can be developed.

What is our responsibility?

People seem confused about the issues, risks, and tradeoffs implied in permitted exceptions for mixing zones. An amendment to HB 328 would transfer into statute stricter regulations governing mixing zones in fish habitat. It would provide specific statutory authorization to allow mixing zones in municipal wastewater treatment areas that had been invaded by salmon, but disallow their authorization in spawning and freshwater fish habitats. This legislation may be viewed at: http://www.akrepublicans.org/seaton/24/spst/seat_hb328.php. The amendment is currently in the House Resources Committee of the Alaska State Legislature. You may express your opinion with a call or letter to the chair, Representative Jay Ramras at: (907) 465-3004; State Capitol, Rm. 104; Juneau 99801; or co-chair, Representative Ralph Samuels at: (907) 465-2095; or State Capitol, Rm. 126; Juneau 99801. Our goal as AFS professionals is to improve the conservation and sustainability of fishery resources and aquatic ecosystems; the new DEC regulatory exemptions for mixing zones go against our mission. ☹



Western Division Annual Meeting

The Western Division of AFS will hold its annual meeting from May 15-19, 2006 in Bozeman, Montana. The symposium theme is: "Natives and Newcomers" and it will explore ramifications of encroaching development in the West on fisheries. Abstracts were due on February 15, 2006. For more information visit the symposium website at: <http://www.fisheries.org/AFSmontana/2006AFSWesternDivisionAnnualMeeting.htm> or contact Leanne Roulson at: lroulson@garciaandassociates.com.

PICES workshop

PICES will hold an intersessional workshop entitled: "Integration of Ecological Indicators for the North Pacific



with Emphasis on the Bering Sea" in Seattle, Washington from June 1-3, 2006. For more information visit: http://www.pices.int/projects/Bering_Indicators/bering.aspx or contact the PICES secretariat at: secretariat@PICES.int.

ASA meeting

The Alaska Chapter of the American Statistical Association (ASA) will hold its annual meeting in Juneau July 18 – 20, 2006. Associated with this meeting, the ASA will be offering a short course to be taught by Dr Jennifer Hoeting and Dr Geof Givens, both professors of statistics at Colorado State University and authors of the book *Computational Statistics*. This short course is geared towards Bayesian analysis, and will follow corresponding chapters in the book. Software used in the course will be the statistical package R, a powerful but free package available for download off the internet. If space permits, this short course is open to anyone interested. Neither the short course nor the meeting is limited to strictly biological statistical applications. Stay tuned as the website develops at: <http://www.amstat.org/chapters/Alaska/> or contact Randy Mullen at: randy_mullen@fishgame.state.ak.us for more information.

ASIH

The Annual Conference of the American Society of Ichthyologists and Herpetologist will be held in New Orleans, Louisiana from July 12-17, 2006. Abstracts were due by March 3. For more information, please visit: www.asih.org or contact Mark Pyron at: mpyron@bsu.edu.



ICBF7

The American Fisheries Society is a co-sponsor of the Seventh International Congress on the Biology of Fish. The congress will be held at St. John's, Newfoundland, Canada,

Meetings and Events

from July 18-22, 2006. Abstracts were due February 15, 2006. For more information see www.mun.ca/biology/icbf7 or contact Kurt Gamperl at: kgamperl@mun.ca, (709) 737-2692.



15th International Salmonid Conference

The Association of River Trusts will host the 15th International Salmonid Conference with the theme: "Salmonids in the 21st Century," from October 17 – 20, 2006 in Baltic Mill Centre, Newcastle-Gateshead. For more information please visit the website as it develops at: http://www.associationofrivertrusts.org.uk/salmonid_conf/index.htm or contact the organizers at: info@associationofrivertrusts.org.uk or by phone at: 00 44 (0) 1208 851369 or 00 44 (0) 1726 822343

International Stickleback Conference

The Fifth International Conference on Stickleback Behavior and Evolution will be held in Anchorage, from July 30-August 4, 2006. The registration deadline is May 1. Please visit the website at: <http://fish.uoregon.edu/sb/stickleback2006> or contact Frank von Hippel at: affvh@uaa.alaska.edu for more information.



AFS 136th Annual Meeting

The Annual Meeting of the American Fisheries Society will be held September 10-14, 2006 in Lake Placid, New York. The theme of the meeting is: "Fish in the Balance," and it will explore the interrelation between fish, aquatic habitats and man. For more information visit the website at: <http://www.afslakeplacid.org/>.

3rd International Symposium on Stock Enhancement and Sea Ranching

The Third International Symposium on Stock Enhancement and Sea Ranching will be held in Seattle, Washington from September 18 – 21, 2006. The abstract deadline is April 15, 2006. Visit the website at: <http://www.searanching.org> or contact: info@searanching.org to learn more.



Gadid Symposium

The 24th Lowell Wakefield Symposium entitled: "Resiliency of Gadid Stocks to Fishing and Climate Change," will be held from October 31–November 3, 2006 in Anchorage. Abstracts are due April 4, 2006 and may be submitted online. For more information, visit the sea grant website at: <http://www.uaf.edu/seagrant/Conferences/gadids/index.html> or contact the symposium coordinator Sherri Pristash at: fyconf@uaf.edu.



International Salmon Conservation, Continued from Page 1

Kamchatka—a large peninsula separating the western Bering Sea and the Sea of Okhotsk—boast some of the greatest biocomplexity and salmon productivity on Earth, along with seven species of Pacific salmon and steelhead. Elsewhere in the RFE, little known species of salmonids such as the giant Siberian taimen (*Hucho taimen*) and the rare sea-run, or Sakhalin, taimen (*Parahucho perryi*)—believed to be one of the ancestors of modern salmon—add to the region's biodiversity value.

A report commissioned by the Wild Salmon Center last fall found that salmon are the true economic cornerstone of many Russian communities, providing up to 45% of local employment in some areas of the RFE. Yet the RFE, like Alaska, is also home to a wealth of nonrenewable resources. As investment pours into Russian oil, gas and mineral development projects, the effects of these projects on the Russian salmon fishery have become a key concern, and one that is certainly not unknown on the Eastern shores of the Bering Sea.

Learning across borders

With all their similarities, Russia and Alaska clearly demonstrate the potential to share salmon management and conservation strategies in order to increase their effectiveness. Accordingly, the Wild Salmon Center is working with diverse international partners to bridge the Pacific. Our mission is to identify, understand, and protect in perpetuity the most important wild salmon ecosystems of the Pacific Rim.

The opportunities in Alaska and Russia are enormous. The rivers of Bristol Bay, for example, represent a prime opportunity for long-term protection of salmon, salmon fisheries, and the ecosystems that sustain them. Alaska's salmon management system, especially as it responds and adapts to new knowledge regarding weak stocks and its rapid modulation of harvest rates to achieve optimal escapement rates, has the potential to serve as a model to Russia, where new fisheries laws are only now going into effect.

Russia can also draw on North American experience in bringing together multiple stakeholders for salmon management and conservation. The Sakhalin Salmon Initiative, a joint Wild Salmon Center and Sakhalin Government initiative, is currently in its early stages, and will convene local and indigenous people, non-governmental organizations, Russian national and regional governments, the private sector, scientific and academic institutes, and international financial institutions around a shared vision: to protect salmonid habitat and related biodiversity, build institutional capacity, and create a blueprint for sustainable economic development.

At the same time, Russia's pristine ecosystems present an opportunity to create protected areas that will inform salmon conservation and management approaches throughout the Pacific Rim. Western Kamchatka's Kol and Kekhta Rivers, for example, epitomize the diversity

and abundance of a thriving salmon ecosystem. The Wild Salmon Center and its partners are working here to create the world's first protected area dedicated explicitly to the scientific study, conservation, and sustainable use of salmon resources.

Approaches for the future

Threats to salmon across the North Pacific—including the increasing resource demands of a growing global population—are not likely to diminish in the coming decades. The Wild Salmon Center strongly believes that an effective conservation strategy will balance risk to salmon by protecting an international portfolio of river basins where ecosystem processes remain viable and where anthropogenic stresses are minimal. Working across jurisdictions to protect the diversity and resilience of these rivers now, while they are functional and intact, represents a proactive, cost-effective down payment for long-term salmon sustainability.

Using the best available science, the Wild Salmon Center is leading the Pacific Salmon Conservation Assessment, a project to identify the rivers of greatest importance for the future of Pacific salmon. Many of these rivers will be in Alaska and the Russian Far East. By identifying these key ecosystems, we can help to ensure that they receive the conservation attention they need to maintain and/or restore their high economic, social, and ecological value. The project is being conducted with advisors from academic institutions and government agencies from around the North Pacific, including the Alaska Department of Fish and Game, the National Marine Fisheries Service, Canada's Department of Fisheries and Oceans and the Russian Academy of Sciences. Initial analyses will be available to colleagues and partners in summer 2006.

We encourage all *Oncorhynchus* readers to reach out to their colleagues across the Pacific to share salmon conservation strategies at home. It is imperative that we work together to steward salmon populations for the benefit of future generations.

Literature cited

- Rahr, G and X Augerot. In press. A Proactive Sanctuary Strategy to Anchor and Restore High-Priority Wild Salmon Ecosystems. In: Lackey, B., ed. Salmon 2100 Project: The Future of Wild Pacific Salmon. American Fisheries Society Press.
- Gilbertson, N. 2003. The Global Salmon Industry. *Alaska Economic Trends* 23(10):3-11. 📍

AFS Annual Meeting

Fairbanks November 13 - 16, 2006

Put this date on your calendar today!

Oncorhynchus

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RETURN REQUESTED - DO NOT FORWARD

2006 Alaska Chapter Officers

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Secretary Steve Zemke, Chugach National Forest, 3301 "C" Street, Suite 300, Anchorage 99503, 907-743-9521 wk, Fax: 907-743-9480, szemke@fs.fed.us

Past President Hal Geiger, ADF&G/CF, P.O. Box 240020, Douglas 99824-0020, 907-465-4257, Harold_J_Geiger@fishgame.state.ak.us

Student Unit President Katie Palof, School of Fisheries and Ocean Sciences, Juneau Center, 11120 Glacier Hwy, Juneau 99801, 907-796-6327 wk, k.palof@uaf.edu

Feel free to contact the Executive Committee members.

2006 AFS Membership Application

You can JOIN the AFS and the Alaska Chapter on-line (or by fax/phone), see <http://www.fisheries.org/html/membership/choicenew.shtml> for details, or fill out the application form and process as noted below.

Print or type applicant's name in full _____

Address _____

City _____ State _____ Zip Code _____

Nation _____ Membership year* _____

Kindly make checks payable to American Fisheries Society in U.S. Currency or drawn on a U.S. bank.

Please mail to Allen Bingham P.O. Box 221804 Anchorage, AK 99522-1804

Professional recruiting others (PROCLUB) _____

If applicant is a student as defined below, the teacher endorsing him signs here.** _____

Name of institution where student is enrolled _____

Date _____

Please provide phone numbers for directory and Society use only:

Home _____ Work _____

Fax _____ Email _____

Employed by:
 federal gov't. state/prov. gov't. industry academia self

- Alaska Dues: \$10.00** **Alaska Student Dues: \$5.00**
- Membership Dues (includes *Fisheries* and Membership Directory)
- Regular (North America): \$76.00 (Other than North America, \$88.00)
- Student (North America)**: \$19.00 (Other than North America, \$22.00)
- Young Professional***: \$38.00
- Retired (North America): (65 or over): \$38.00 (Other than North America \$44.00)
- Life (All): \$1,737.00 (includes Fisheries and one other journal of choice)

¹ Prices are for AFS members only ² Membership not required for subscription
* New members accepted Jan. 1-Aug.31 are credited to full membership for that year. (Back issues of Journals are sent.) Members accepted Sept. 1-Dec. 31 credited to full membership as of next Jan. 1, unless requested otherwise. Membership on calendar year only.

Journal Subscriptions (Optional)

- Transactions of the AFS¹ N.A. Journal of Fisheries Management¹
- \$43.00 Paper in North America \$48.00 Paper other than N.A.
- \$25.00 E-Pub via WWW/Internet
- North American Journal Journal of Aquatic Animal Health¹
- \$38.00 Paper in North America \$41.00 Paper other than N.A.
- \$25.00 E-Pub via WWW/Internet

** Bona fide students of fisheries subjects are eligible for Student membership (limited to 6 years). Persons employed full-time not eligible. Teacher endorsement required (see above).

*** Within 3 years of graduation.

NOTE: Retired membership for Active members upon retiring at age 65. Sustaining membership for commercial firms, conservation clubs, or others desiring to support the Society. Library Subscriptions include bimonthly *Transactions*, quarterly *North American Journal of Fisheries Management*, *Journal of Aquatic Animal Health*, quarterly *North American Journal of Aquaculture*, bimonthly *Fisheries*, and Membership Directory.

Trout (*Salmo trutta*, *Oncorhynchus mykiss*, *Oncorhynchus clarki*, *Oncorhynchus aguabonita*, *Oncorhynchus gilae*, *Oncorhynchus apache* and *Oncorhynchus chrysogaster*): live; fresh or chilled; frozen; dried, salted or in brine, smoked; fillets and other fish meat; flours, meals and pellets, fit for human consumption. Giga-fren. This study evaluated the >400-fold tolerance to acute waterborne Cd of a metal-tolerant fish, yellow perch (YP, *Perca flavescens*), relative to a sensitive model fish Find oncorhynchus stock images in HD and millions of other royalty-free stock photos, illustrations and vectors in the Shutterstock collection. Thousands of new, high-quality pictures added every day. 1,307 oncorhynchus stock photos, vectors, and illustrations are available royalty-free. See oncorhynchus stock video clips. of 14. Salmon *Oncorhynchus masou* isolated on white background. *Oncorhynchus* synonyms, *Oncorhynchus* pronunciation, *Oncorhynchus* translation, English dictionary definition of *Oncorhynchus*. Noun 1. *Oncorhynchus* - Pacific salmon including sockeye salmon; chinook salmon; chum salmon; coho salmon genus *Oncorhynchus* fish genus - any of various... *Oncorhynchus* - definition of *Oncorhynchus* by The Free Dictionary. <https://www.thefreedictionary.com/Oncorhynchus>. Printer Friendly.