New Year’s Message from the President

Our 20th Anniversary Meeting last October was a major milestone for our organization, and it was a great pleasure for me that it was held in the beautiful city of St. Petersburg, Russia. The meeting proved to be very fruitful, and important progress has been made in the enforcement and scientific research responsibilities of our organization. We continue to make great strides in accomplishing the tasks we set for ourselves as an organization, and I have no doubt the next 20 years will provide new challenges and opportunities to the Commission.

Our continued joint enforcement efforts have successfully deterred illegal, unreported, and unregulated fishing activity. In 2012, the Committee on Enforcement continued its pre-season coordinating work in Jeju, Republic of Korea, discussing procedures of interception and seizure of vessels of interest. Successful enforcement actions have resulted in the apprehension of a stateless vessel engaged in illegal driftnet fishing in the Convention Area. I wish the ENFO every success in their continued coordinated enforcement efforts at their spring meeting in Vancouver, Canada.

Recent catches of Pacific salmon remain at historic high levels. The total commercial catch in 2011 by our member countries was over 1 million tonnes, composed mostly of pink and chum salmon. The Committee on Scientific Research and Statistics discussed linkages between climate change and variability in North Pacific salmon production. Next spring, the NPAFC will convene a workshop, “Migration and Survival Mechanisms of Juvenile Salmon and Steelhead in Ocean Ecosystems”, in Honolulu to bring scientists together for discussion of factors affecting production at this critical early period of the salmon’s marine life history.

The Committee on Finance and Administration discussed current and projected financial budgets and implemented the recommendations of the Performance Review. Among these initiatives are new ideas for increasing the effectiveness of communications and outreach for our organization.
The past year has been a time for many well-deserved congratulations to several individuals. I am happy to say two internationally recognized salmon scientists, Drs. Richard Beamish and Vyacheslav Shuntov, are the first recipients of the NPAFC Award. They have been recognized for their career-long dedication to increasing scientific knowledge related to Pacific salmon in the marine environment.

In 2013 there will be some important changes at the Commission. Next fall the annual meeting will be conducted by email, and I hope all participants will find it a new and interesting experience. Our dedicated Executive Director, Mr. Vladimir Fedorenko, will retire next summer after many years with the Commission. His foresight and vision have been critical in helping NPAFC adapt smoothly to changing conditions over the years. From July 1 our next Executive Director, Dr. Radchenko, will assume his new assignment. I give them both my sincere best wishes.

I would like to take this opportunity to extend my best wishes to all my NPAFC colleagues and fellow officers for a healthy and prosperous New Year. I send my warm best wishes to you and your families for the New Year, and I hope 2013 will be a successful and productive one for all of us and for all our salmon. Happy New Year!

Vladimir Belyaev
NPAFC President
Member countries of the NPAFC, Canada, Japan, Republic of Korea, Russia, and the United States, met for the Twentieth Annual Meeting in St. Petersburg, Russia, on October 7-12, 2012. The meeting was chaired by Dr. Vladimir Belyaev, President of the NPAFC.
2012 NPAFC Award Recipients Announced

The Commission recognized the recipients of the 2012 NPAFC Award at the 20th Annual Meeting: Dr. Richard J. Beamish, (Emeritus Scientist) Department of Fisheries and Oceans Canada, Nanaimo, Canada, and Professor Vyacheslav P. Shuntov, (Principal Research Scientist) Pacific Research Fisheries Center (TINRO-Center), Vladivostok, Russia. Drs. Beamish and Shuntov were congratulated for their sustained commitment to understanding the mechanisms controlling abundance and factors affecting the biology of anadromous stocks.

Dr. Richard (Dick) Beamish is an internationally recognized scientist who deserves recognition for his exemplary leadership in the areas of scientific research and international cooperation relating to the conservation of salmon in the marine phase of their life history. In the 30 years since he was first appointed chief scientist for Canada at the International North Pacific Fisheries Commission and later at NPAFC, he has led research as a member of the Canadian delegation and as the chair of several scientific research committees. Dick has published over 60 primary papers related to the marine life history of Pacific salmon. His published works include those of outstanding significance at global as well as local scales. His extensive body of published literature includes the early recognition of the linkage between climate and Pacific salmon abundance, effects of climate change, and influential works on investigations of salmon parasites, juvenile salmon survival, fish ageing techniques, and fish taxonomy. Dick has been dedicated to leading scientific initiatives in local, national, and international arenas and has fostered a high level of international scientific cooperation at the NPAFC. He has applied his leadership skills to numerous organizational committees for NPAFC conferences and workshops and to the editorial boards for publication of NPAFC bulletins and technical reports. Dick has also been recognized for his exemplary teaching and mentoring of future fisheries scientists.

Professor Vyacheslav Shuntov is an internationally known scientist in the field of marine biology. The approach and methods developed under his leadership have provided the foundation for over 100 integrated Russian surveys conducted since 1980 for monitoring the state and dynamics of large-scale ecosystems of the North Pacific Ocean. His ecosystem approach has significantly transformed earlier views on the structure and function of plankton, nekton, and benthic communities in Russian waters. Vyacheslav was among the first to develop methods based on trawl surveys for using salmon abundance to assess its forage base and to evaluate feeding habits of salmon and other nektonic species at sea, and these methods have been adopted in other countries. He is the author of more than 300 scientific papers and books dedicated to the biology, ecology, and productivity of Pacific salmon, other pelagic marine organisms, and to the challenges of marine fisheries exploitation and management. Vyacheslav has led investigations at several international organizations, including NPAFC where he has directed the Russian cooperative studies for BASIS (Bering-Aleutian Salmon International Survey) since the program’s inception in 2002. He has supervised and guided many postgraduate students, and a large number of them have moved into leadership roles in NPAFC-related scientific studies. Throughout his career, Vyacheslav has advocated both for scientific knowledge on the nature of the sea and its inhabitants and for the protection and rational use of the environment.

Established in 2011, the NPAFC Award is presented to groups or individuals whose sustained, significant contributions have helped improve the conservation of anadromous salmon and steelhead stocks in the North Pacific Ocean. These contributions can be from the fields of scientific research, enforcement, international cooperation, or management.

Nancy Davis
NPAFC Deputy Director
The Committee on Finance and Administration, or “F&A,” as it is often called, continued to give new direction to the Commission, particularly in the area of communications, through its work at the 2012 Annual Meeting in St. Petersburg.

F&A oversees the management of the Commission. Its first duty lies in oversight of the budget. In this area, the committee found that the Commission’s financial situation remains sound and it expects the Commission to operate effectively for several more years at the current level of contributions by the member countries.

The committee also provides oversight on matters of personnel. In anticipation of the new Executive Director who will begin work on July 1, 2013, the committee recommended that a list of performance expectations be developed. Canada and the United States volunteered to develop a draft and circulate it to the Heads of Delegation in time to be incorporated into the new employment contract.

After considerable review of the needs of the Commission to carry out strategic projects of importance and of the financial implications of adding staff, the committee formally recommended the Secretariat hire an additional person for staff administrative and technical support beginning July 1, 2013.

The Secretariat also reviewed the current experience of having an “on-the-job-trainee,” who is from the Republic of Korea. This program allows young Korean civil servants to work in other countries to gain experience in international work and in another language. The committee recommended the Secretariat be open to accepting on-the-job-trainees from all the member countries.

F&A was particularly active this year in looking at how the Commission communicates. Early in 2012, acting in my private capacity as a communications consultant but on a pro-bono basis, I conducted an extensive discussion with the Secretariat staff, in which we reviewed all the aspects of NPAFC communications. For example, we discussed how communications serves the mission of the NPAFC, the relative strengths and weaknesses of current NPAFC communications, opportunities for improvement, the most important audiences of the NPAFC, and the message that the NPAFC needs to deliver. I then drafted a communications plan for the NPAFC. Once this plan is finalized, it will be shared with all the committee members.
In the plan, I observe that the Commission’s current communications have both strengths and weaknesses. Recommendations include improvements in the use of news releases to get better media coverage of the Commission’s work; improvements to the website; and considering translation of important publications and core information on the website into the languages of all the Parties. The report recognizes that some of these items may be costly and that the communication plan must be realistic.

Gary T. Smith has a long interest in fisheries conservation. He serves on the boards of Long Live the Kings, a salmon conservation non-governmental organization, and the Seattle Aquarium Society. Among other accomplishments, Gary helped design the successful hatchery reform program, launched in 2000, to scientifically evaluate the 200 anadromous fish hatchery programs in western Washington’s 100 state and tribal hatcheries. He also helped the Washington Department of Fish & Wildlife develop its 21st Century Salmon and Steelhead Initiative to meet its responsibilities in recovering salmon and steelhead and provide sustainable fisheries. Gary is a partner in Smith & Stark, a public affairs consulting firm in Seattle. He also has served as Director of Policy and Communications in Washington, D.C. for one of Washington State’s U.S. Senators and has held positions in state and local government and the private sector.

In another area of communications, the Secretariat demonstrated the final version of the ENFO Promotional video. The video has been produced in English, Japanese, Korean, and Russian and distributed to each country. The video in each language is available on the Commission’s website (www.npafc.org) and on YouTube (http://www.youtube.com/watch?v=C3JVBj h6gVI&feature=player_embedded).

F&A recommended the membership of the new working group on Publication Policy. The working group will ensure that the various Commission publications are produced so as to take full advantage of electronic and online publishing and will help give guidance on other communications matters. Members will be the chairpersons of the CSRS, ENFO, and F&A committees and the Science Sub-Committee, and will be chaired by the NPAFC Deputy Director.

Finally, the F&A committee worked out the meeting schedule for the transition to holding the NPAFC Annual Meeting in the spring. The 2013 F&A meeting and the 2013 Annual Meeting will be held virtually, by email, in September and November 2013, respectively. The 22nd Annual Meeting will be held in person May 12-16, 2014, and hosted by the U.S. in Portland, Oregon.

Terms of the current Commission officers will be extended until the adjournment of 2014 Annual Meeting.

In the transitional period this year, I look forward to working with the Secretariat staff to complete the communications plan and prepare for the virtual meeting of the F&A Committee this autumn. I’m grateful to the committee for its excellent participation at this past Annual Meeting and to the Secretariat staff for its preparedness and support.

Gary Smith
F&A Chairperson
NPAFC Representative of the United States

Gary T. Smith has a long interest in fisheries conservation. He serves on the boards of Long Live the Kings, a salmon conservation non-governmental organization, and the Seattle Aquarium Society. Among other accomplishments, Gary helped design the successful hatchery reform program, launched in 2000, to scientifically evaluate the 200 anadromous fish hatchery programs in western Washington’s 100 state and tribal hatcheries. He also helped the Washington Department of Fish & Wildlife develop its 21st Century Salmon and Steelhead Initiative to meet its responsibilities in recovering salmon and steelhead and provide sustainable fisheries. Gary is a partner in Smith & Stark, a public affairs consulting firm in Seattle. He also has served as Director of Policy and Communications in Washington, D.C. for one of Washington State’s U.S. Senators and has held positions in state and local government and the private sector.
Reflections on the 2012 CSRS Meeting and the Year Ahead

Welcoming in the New Year, it seems appropriate to reflect on our recent Annual Meeting and provide some thoughts on the upcoming year. Time really does fly. I am already moving into the second year in my term as Chairperson of the Committee on Scientific Research and Statistics (CSRS).

The CSRS met on October 7-11, 2012, during the NPAFC Annual Meeting in Saint Petersburg, Russia. There were 34 participants from the five member countries. The historical and cultural city of St. Petersburg is spectacular and the receptions and social events were beyond compare. Holding the 20th Anniversary Meeting there was very fitting. Thank you again to our Russian hosts for their warm hospitality. This was my first, and hopefully not my last, visit to St. Petersburg. My only regret is that I did not leave enough personal time in my itinerary to see more of the museums and culture.

Perhaps inspired by the setting, the CSRS meeting was an extremely productive one. One of the major accomplishments was that of addressing the CSRS list of actions identified by the Performance Review. I would like to recognize the efforts of Nancy Davis, Jim Irvine, the CSRS Points of Contact, and the Working Group Chairpersons in conducting the review and revision of the CSRS and working group’s terms of reference. Completing this in one year was remarkable. These documents will serve us well as we strive to be efficient and better align our activities with the goals of the Commission.

The information exchange and discussion related to the five major themes in our Science Plan continues to build, with 54 research documents submitted for this meeting, including publication lists related to the research themes from three countries. Workshops and publications are among the important tools we have to build scientific understanding. We released Technical Report 8 this year, summarizing the Pink and Chum Workshop, and the 20th Anniversary publication is progressing well. Coming up very soon in April 25 and 26 in Hawaii we will host the third juvenile salmon workshop. The response to the call for papers for the workshop was excellent with over 87 abstracts received. The program of abstracts and registration for the workshop is available at the website (www.npafc.org).

The workshop will be preceded by our next CSRS meeting on April 23 and 24. The transition to annual meetings in spring with a short turnaround from our fall 2012 meeting poses some interesting challenges.

For the upcoming year, my focus will be on continuing to improve our approach to planning and integrated research. In terms of planning, I see a need for the development of more specific objectives and indicators to better measure the performance of our committee. This will be discussed in April as we prepare to meet the challenge of developing a new Science Plan. Regarding research, we need to work towards even more targeted joint monitoring and research to provide an explanation for the changing
trends in abundance we are seeing in the North Pacific. The need to explain the strong production of pink and chum salmon and the serious drop in productivity noted for sockeye and Chinook salmon populations in many of the participating countries are good examples. The CSRS recommended examining the feasibility of the Year of the Salmon proposal which is one potential approach to coordinated research. Our commitment to exchange information on catch from the Commission’s Convention Area and domestic fisheries, as well as escapement, determining hatchery/wild ratios, and additional measures of productivity are key building blocks for this work. I look forward to discussing approaches to examining productivity trends of salmon and related species across the North Pacific with the CSRS and the Science Sub-committee in April.

Our research will also benefit from increased engagement of other organizations conducting research in the North Pacific that have complementary knowledge of salmon and related species, as well as factors affecting climate and ocean conditions. Improving our communication with organizations such as the North Pacific Marine Science Organization (PICES) and the Pacific Salmon Commission is a priority for me. At the Annual Meeting we agreed to approach PICES and thanks to Urawa-san, who met with PICES following our meeting, we are making progress towards the formation of a focus group to be discussed at PICES in fall 2013 in Nanaimo, Canada.

I would like to close with a number of acknowledgements. Thank you to the Secretariat staff and to our translators who do an outstanding job. In particular I want to thank Nancy Davis who provides strong leadership and support to the CSRS. Congratulations to Richard Beamish and Vyacheslav Shuntov in receiving the 2012 NPAFC Award. A very large thank you goes to Vladimir Fedorenko for all of his hard work over the years as Executive Director of the Commission, and best wishes in his future endeavours. I also look forward to working with Vladimir Radchenko in his new role at the Commission.

Again, all the best in the New Year and I look forward to seeing everyone in Hawaii in April!

Mark Saunders
CSRS Chairperson

Mark Saunders manages the Salmon and Freshwater Ecosystems Division for Fisheries and Oceans Canada at the Pacific Biological Station in Nanaimo, B.C. The Division includes staff working on salmon stock assessment, freshwater habitat, molecular genetics, fish health, and marine ecology. The first half of his 30-year career focused on stock assessment and research of marine fish including Pacific hake, pollock, sablefish, and spiny dogfish. The second half of his career included work on hydroacoustic surveys and fisheries oceanography of the California Current system. In 2003 Mark took on an assignment working on development and implementation of Canada’s Wild Salmon Policy and then returned to his current position in 2009. He lives in the small town of Chemainus, Vancouver Island, where he lives with his wife, two daughters, and a large and slightly neurotic white dog. Mark’s hobbies include kayaking, cycling, skiing, and running the local soccer club.
The objective of the Committee on Enforcement (ENFO) is coordination of activities to detect and deter illegal, unregulated, and unreported (IUU) fishing activities in the North Pacific Convention Area (see www.npafc.org). Our compliance monitoring along with effective and efficient information exchanges on IUU fishing activities is accomplished by member countries and their observation activities within the Convention Area using various combinations of air, space, and seasurface patrols.

The ENFO meeting was held at the 20th NPAFC Annual Meeting on October 8-9, 2012, in St. Petersburg, Russia. All the Commission’s member countries were in attendance, as well as observers from Taiwan. The 2012 high-seas enforcement activities and other organizational matters were actively discussed.

2012 was a year of remarkable cooperation among the member countries. Japan invited Canada’s High-Seas Driftnet (HSDN) operation to be flown from Hakodate, Japan. Canada’s Department of Fisheries and Oceans (DFO) completed eight air patrols flying a total of 77.6 hours. These patrols involved flights by both a CC-177 and a CP-140 aircraft with their complement of aircrew, technicians, and two DFO fishery officers. Two Japanese fisheries supervisors joined the Canadian CP-140 flights originating in Japan. The HSDN operation proved to be very efficient and effective because of their being able to operate from that location. During aircraft patrols, digital photographs were taken of suspicious vessels and provided to all committee members. Canada also utilized Radar Satellite (RS2) data to assist with situational awareness and aircraft surveillance. No HSDN vessels were sighted.

Japanese fisheries enforcement agencies conducted 94 hours of aircraft patrols using a Citation V ( Fisheries Agency of Japan, FAJ) and a Gulf V (Japan Coast Guard, JCG), which included participation by a United States Coast Guard (USCG) observer on board to support USCG Cutter Rush surface patrols in the Convention Area. The FAJ conducted vessel patrols for 10 days during which no driftnet fishing was observed.

Although Korea’s fisheries enforcement inspectors did not patrol the Commission’s Convention Area in 2012, they continued to cooperate with other members to identify possible IUU fishing threats and to eradicate such activities in the Convention Area. The Korean Government is also currently reviewing the applicability of its domestic regulations to board and inspect suspected IUU vessels within its Exclusive Economic Zone (EEZ) when these vessels conduct operations in the Convention Area and attempt to make a port call in Korea.
Operation North Pacific Guard of the United States included 107 hours of enforcement activities aboard a HC-130 aircraft and a 17-day surface patrol by the USCGC Waesche in the Convention Area. USCG Cutter Rush patrolled for several months and embarked for a portion of their cruise with enforcement officers from the People’s Republic of China, Fishery Law Enforcement Command (FLEC). During this time, the USCGC Rush sighted a suspected HSDN fishing vessel, the Da Cheng, approximately 800 nautical miles east of Japan. The Da Cheng claimed to be of Indonesian registry, but this was denied by the Indonesian Government. The stateless vessel was then transferred to FLEC authorities. Evidence showed the Da Cheng to be the same vessel identified in 2011 as the Shun Li No. 6 (and later changed to Mitra 888). In 2011 this vessel was in the vicinity of an enforcement action against the Bangun Perkasa, but the Shun Li No. 6 had escaped while the USCGC Munro was engaged in boarding and seizure of the other vessel (See Newsletter No. 31, January 2012). After seizure of the Bangun Perkasa, the NOAA’s Office of Law Enforcement (OLE) decided to scrap the vessel to ensure it will never again engage in IUU activities.

Several Russian vessels embarked with enforcement officers for North Pacific patrols for a total 156 days. No IUU fishing activities were detected. Russia has been focusing on international activities related to IUU fishing. The Russian and the Cambodian governments reached an agreement that if custody is handed to enforcement officers with documents, then any Cambodian-flagged vessels seized for IUU fishing will be deprived of the flag of Cambodia. This will speed investigations and eradicate IUU fishing activities by Cambodian-flagged vessels.

Observers from Taiwan reported the Yu Shiu No.2 patrolled in the North Pacific for 74 days. No driftnet vessels or suspected illegal activities were observed. Taiwan authorities will continue to cooperate with NPAFC members to ensure conservation of North Pacific anadromous stocks.

Organizational matters were discussed including progress on the ENFO list of actions. One action item was to analyze the feasibility of applying FAO’s (Food and Agriculture Organization) suggested port state measures to NPAFC member countries and to provide recommendations to the Commission. (For more information on port state measures, see Newsletter No. 32, July 2012.) While members did not report any progress on this issue at the meeting, they were encouraged to provide proposals on this issue for discussion at the next ENFO meeting.

On another topic, the committee has reviewed its terms of reference and discussed the NPAFC contribution towards implementation of the international plan of action (IPOA) on IUU fishing. A working group developed a draft terms of reference for the meeting, which was revised after discussion and review. Members were encouraged to provide additional comments for the next meeting. The last item dealt with how to engage with the North Pacific Fisheries Commission (NPFC). Cooperation with the NPFC was postponed until it is established, which will likely happen in late 2013.
Members agreed that, rather than creating its own IUU vessel list, the NPAFC will use the NPFC IUU vessel list when it becomes available. In the meantime, it was suggested that ENFO use the “vessels of interest” list.

At the meeting, the Secretariat demonstrated the ENFO Promotional Video, which is now available in four languages. The video was created at a reasonable cost with assistance of the members and help of the Secretariat staff. This video is available for viewing on the Commission’s website (www.npafc.org) and YouTube.

The United States hosted bi-weekly enforcement conference calls in 2012. While not all the members could participate, everyone acknowledged and thanked the US for their effort and for offering to host calls on a monthly basis in 2013. The Russian members and Captain Lukyanov in particular were thanked for hosting and maintaining the integrated information system (IIS) for many years. The committee agreed on the high value of this system for exchanging information and each country will encourage their people to use it and to keep entries up-to-date.

NPAFC member countries continue their individual and cooperative efforts to detect, prohibit, and eradicate IUU fishing activities in the Convention Area. Plans for our next meeting in March 2013 in Vancouver, Canada, include detailed enforcement activities and other key issues, such as the analysis of FAO’s port state measures and consideration of ENFO’s revised terms of reference.

Jeongseok Park
ENFO Chairperson
NPAFC Representative of the Republic of Korea

Jeongseok Park was born and raised in Busan, Republic of Korea, where he has lived for almost 30 years while obtaining his BSc and MSc, and completing the coursework for a PhD in Fisheries Resources Economics from Pukyong National University. His specific areas of interest include bio-economics of fisheries management; quota allocation schemes; and fisheries monitoring, control, and surveillance issues. Jeongseok worked for the Korea Maritime Institute as a researcher dealing with Korean domestic fisheries issues, including social-economic assessment and evaluation. In 2006 he joined the International Fisheries Organization Division of the Ministry for Food, Agriculture, Forestry, and Fisheries (MIFAFF) as Assistant Director. Jeongseok represents his government as a Fisheries Negotiator at international fisheries organizations including the International Commission for the Conservation of Atlantic Tunas (ICCAT), Indian Ocean Tuna Commission (IOTC), International Whaling Commission (IWC), and North Pacific Fisheries Commission (NPFC), which is currently being established. At NPAFC, Jeongseok is the Chairperson of the Committee on Enforcement (ENFO) and in 2012 he was named a Representative of Korea. He enjoys and appreciates the life-enhancing experiences that have come from opportunities to visit diverse cultures during his fisheries management career.
3rd International Workshop on
Migration and Survival Mechanisms
of Juvenile Salmon and Steelhead in
Ocean Ecosystems

April 25-26, 2013
Sheraton Princess Kaiulani
Honolulu, Hawaii, USA

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Invited Speakers

Vladimir Radchenko (Vladivostok, Russia)
Marc Trudel (Nanaimo, Canada)
William Heard (Juneau, USA)

Objectives

• Identify ecological mechanisms regulating production
• Integrate information on environment and production during
  critical life history stages
• Relate variation in abundance, growth, and survival to climate–
  induced changes in habitat

Topics

1. Seasonal distribution and migration route/timing
2. Hydrological characteristics, primary production, and prey
   resources
3. Trophic linkages, growth rates, and predation rates
4. Ecological interactions among species and populations
5. Survival rate and survival mechanisms
6. Survival and salmonid ecology during the first winter at sea

Organizing Committee

Joseph Orsi (Auke Bay Laboratories, USA; Organizing Committee Chairperson); Kwan Eui Hong and
Ju Kyoungh Kim (Yangyang Salmon Station, Korea); Marc Trudel (Pacific Biological Station, Canada);
Shigehiko Urawa (Hokkaido National Fisheries Research Institute, Japan); Alexander Zavolokin
(Pacific Scientific Research Fisheries Center, Russia); Nancy D. Davis (NPAFC Secretariat)
In recognition of the importance of understanding juvenile salmonid ocean production, the NPAFC has organized a workshop on the subject of juvenile salmonids in marine habitats. The initial period after juvenile salmon migrate to sea and the following first winter have been suggested as critical phases in ocean survival of anadromous populations. Observations indicate there is considerable inter-annual variation in abundance, growth, and survival rates of juvenile salmon in the ocean related to climate-induced changes in habitats at regional and local scales. This workshop will provide researchers with the opportunity to share and review current information on migration and survival mechanisms of juvenile salmon and steelhead in ocean ecosystems.

The two-day program includes invited presentations by Drs. Vladimir Radchenko and Marc Trudel who will review recent advances in marine juvenile Pacific salmon research in Asia and North America, respectively. Dr. William Heard will present the workshop wrap-up. There will be 31 contributed oral presentations and approximately 50 poster presentations. Presenters include international salmon experts from Japan, Republic of Korea, Russia, China, Canada, and the United States.

**Tentative Schedule**

**April 24 (Wednesday)**
- 15:00-18:00 Pre-Registration outside the Ilima Room
- 19:00-21:00 Dinner Reception on the Diamond Lawn at the Moana Surfrider (across the street from the workshop venue)

**Workshop**

**April 25 (Thursday)**
- 07:30-12:00 Registration
- 08:30-17:10 Oral Presentations (Ilima Room)
- 17:20-19:30 Poster Session (Kahili Room)

**April 26 (Friday)**
- 08:30-17:00 Oral Presentations (Ilima Room)

**Registration Fee** (US dollars):
- Regular: $175
- Retiree: $100
- Student (without reception): $40
- Reception only: $50

**Visit our website**: [http://www.npafc.org/new/index.html](http://www.npafc.org/new/index.html) for details on the following:

- Program
- Abstracts
- Registration
- Accommodations

**SEATING IS LIMITED. REGISTRATION IS ACCEPTED ON A FIRST COME FIRST SERVED BASIS**
While salmon consumption is very popular in Korea today, only a small percentage of the fish consumed is commercially-caught Korean salmon. Chum, pink, and masu salmon are distributed in eastern Korea (Machidori and Kato 1984, INPFC Bull. No. 43; Heard 1991, Pacific Salmon Life Histories p. 122), but nowadays only chum salmon is abundant enough to support commercial fisheries. In 2010 the commercial catch of chum salmon was 139 metric tonnes, which pales in comparison to the 9,334 metric tonnes of imported salmon products sold in South Korea (2010 NPAFC Statistical Yearbook; 2010 Ministry for Food, Agriculture, Forestry, and Fisheries, MIFAFF Statistics). Most of the salmon sold in the marketplace is farmed Atlantic salmon, which originates predominately from Norway and Chile. Pacific salmon products are imported from Russia, Canada, and the United States.

Despite current low commercial chum salmon catches, the Korean fishery has a long history. According to the 1454 Sejongsirok almanac, salmon was a local product available from the eastern provinces of Hamkyung-do, Gangwon-do, and Gyoungsang-do (Fig. 1). Fisheries research from the 1890’s observed plentiful salmon distributed near Youngheung Bay, where fishermen speared as many as 2,000-3,000 salmon a day. Other documents from the early 1900’s tell of salmon returning to spawn in the Dooman River in numbers so large that most fishermen set their nets there to catch the abundant run.

However, in recent decades commercial catches of chum salmon in South Korea have seen sharp declines. Since the 1990’s (1993-1999), the average commercial catch of 395 metric tonnes has dropped to nearly one third, or 132 metric tonnes, during the 2000’s (2000-2010; Fig. 2).

Artificial production of chum salmon began in 1913 in Hamkyung-do, which is located in the northeastern region of the peninsula. In 1967 the South Korean government built hatcheries in the cities of Samchuk, Gangwon-do, and Milyang, Gyoungsang-do, but initial production was very low (Fig. 3).
In 1984 the government established the Yangyang Salmon Station in Gangwon-do, now a branch of the Korea Fisheries Resources Agency (FIRA). The FIRA is the primary salmon research institution in Korea, and with their salmon restocking project, FIRA is taking the lead in the area of anadromous fish scientific investigations. The agency is currently conducting scientific studies aimed at building a system for salmon resource management that ensures chum salmon survive and return in healthy numbers to Korean waters. The Yangyang Station has worked hard to continuously improve its rearing and research facilities and, because of this effort, the total number of chum salmon fry releases has increased significantly from around 2 million in 1984 to over 20 million in 2011 (Fig. 3).

Despite increases in the number of salmon fry released, commercial catches have decreased. Declining commercial catches may be related to unusually low and decreasing brood-year return rates of adult chum salmon to the fisheries since 1990 (Fig. 4). According to a 2006 Korean report to CSRS (Kang et al. 2006, NPAFC Doc 976), the survival rate (i.e., return rate) of Korean chum salmon was about 1.5% in the 1990s and 0.2% in the 2000s. This is quite low as compared to a typical return rate in the range of 1-2% for chum salmon returning to Honshu, Japan (Hiroi 1998, NPAFC Bull. 1:23-27). Negative correlations between adult returns of Korean chum salmon and mean spring coastal water temperatures have suggested a link between lower fish survival during the early marine period and higher water
temperatures (Kang et al. 2006, NPAFC Doc 976). Korean salmon scientists consider recent low return rates of chum salmon to Korean rivers are related primarily to warming water temperatures in rivers and the coastal marine environment that is detrimental to Korean chum survival and related secondarily to heavily skewed sex ratios in the 2000s, with a preponderance of male chum salmon returning to Korean rivers.

Every March, FIRA sponsors a salmon-fry releasing ceremony with many citizens and school children participating (Fig. 5). The ceremony helps people become more informed about their salmon resources and about the importance of river and coastal ecosystems. Continued research combined with growing public awareness of salmon issues are crucial components in the efforts to improve salmon returns to Korean rivers for current and future generations.

Youngho Park graduated from the Seoul National University, Republic of Korea, with a Bachelor’s in Economics and has completed the coursework for a Master’s in Public Policy. He joined the Ministry for Food, Agriculture, Forestry, and Fisheries (MIFAFF) in 2003, where he initially managed supply and demand of Korean agricultural products, promoted Korean cuisine, and developed food-safety strategy. In 2010 he moved to the Division of Distant-Water Fisheries at MIFAFF and began working on fisheries enforcement. The opportunity arose for a two-year training period abroad, and he applied to the NPAFC, joining the Secretariat as an on-the-job trainee in January 2012 to increase his exposure to international organizations. Youngho enjoys travelling and has visited North and South America, Africa, Europe, and Asia. During his stay in Vancouver, he and his wife have made excursions in western Canada and the United States. Youngho plans to return to Korea in late spring, 2013.

Kwan Eui Hong was born in Gangneung, Gangwon-do, Republic of Korea. After obtaining a Bachelor’s and Master’s degrees, he completed a PhD in the field of Aquaculture. For 34 years he has worked as a public official conducting research at the National Fisheries Research and Development Institute (NFRDI) and the National Marine Biological Resources Construction Executive Agency in the Ministry of Maritime Affairs and Fisheries. Kwan Eui currently serves as the Director of the Yangyang Salmon Station of the Korea Fisheries Resources Agency (FIRA). Throughout his career, he has endeavored to recover and enhance inland fish and chum and pink salmon resources in the area of Korea’s east coast. Kwan Eui is a lifelong sports enthusiast. During his school years, he was an avid soccer player and now enjoys the practice of Taekwondo.
Just over 50 years ago as a bona-fide salmon neophyte, I was taught that almost all abrupt swings in run-strength of Pacific salmon were due to extreme variability in freshwater survival. The wisdom of the day held that if salmon had favorable freshwater survival, resulting in reasonable numbers of juveniles migrating to the ocean, you could count on strong adult returns. Back then, the ocean life of salmon was pretty much a mysterious black box where what happened there was little known and poorly understood. At best, the ocean was considered to be a stable, consistent environment for salmon.

Of course we now know that paradigm is false and that marine survival rates of salmon fluctuate as much and oftentimes more so than freshwater survival. This awareness and understanding came about in large measure because of focused marine research by numerous individuals and organizations, as exemplified by the cooperative international efforts of INPFC (International North Pacific Fisheries Commission) and NPAFC scientists. Tagging juveniles leaving freshwater and immature and maturing salmon on the high seas, and utilizing stock-specific and regional scale patterns analysis and advanced genetic techniques, scientists began to illuminate the dark mysteries of salmon ocean life. We gained insight into seasonal migrations, distributions, and abundance patterns of regional stock-groups. From detailed studies on food webs, diets, trophic linkages, variable climatic and oceanographic conditions, and relative abundances of the different species in diverse parts of the ocean, we began to better understand the variations in growth rate and size of returning adults. Predation studies began identifying some of the principal ocean predators of salmon. As scientists resolved some of these and other issues, they developed collective data-sets that told us salmon survival in ocean environments fluctuated greatly.

Over the years I’ve come to view salmon survival from brood year to brood year as analogous to what happens when you pull the handle of a slot machine and the reels start spinning only to stop one at a time registering a good, neutral, or bad outcome. Of course the survival of a given salmon year-class involves many more variables than the three reels of a slot machine. Salmon survival involves many life-history components, including adult escapements, spawning success, overwinter stream conditions, fry or smolt rearing conditions in streams and lakes, juvenile migration to marine habitats and those first critical weeks and months, long distance sea migrations with a vast array of prey food and predator encounters, overwintering marine conditions, and (depending on the species) repeated annual oceanic phases. All these components interact to determine survival. A bad result at any single life stage dramatically affects the final picture. Understanding how these different life stages of Pacific salmon respond to variable marine environments is one of the central themes of NPAFC science.

The NPAFC as an organization shows just how well a group of international scientists can work together. I have especially appreciated the opportunity to participate in this exceptional spirit of cooperation among leading scientists from our respective countries. This has led to the development of many friendships with other scientists and these relationships, both personal and professional, have brought greater comprehension of each country’s...
William (Bill) Heard first came to Alaska in 1958 as a graduate student from Oklahoma State University where he earned degrees in zoology and fisheries. After initially returning to Oklahoma, Alabama, and Arkansas to work on warm water fish and fisheries, the lure of Alaska drew him back north, and in 1960 he joined the Auke Bay Laboratories to study sockeye salmon and other fishes in the Katmai Monument and the Alaska Peninsula. For almost 40 years, his studies have focused on pink, coho, and Chinook salmon at the Little Port Walter Marine Station. He supervised research on early marine ecology of salmon, stock enhancement, hatchery-wild interactions, and long-term monitoring of biophysical parameters affecting salmon. As a certified NOAA diver, Bill registered almost 1400 dives in his career. He has served on technical committees for NPAFC, Pacific Salmon Commission, U.S.-Japan Natural Resources Aquaculture Panel, and the Governor’s Fisheries Council for developing policies for Alaska’s hatcheries. He has received awards from the State of Alaska for Technical Achievement, American Fisheries Society for Chinook Salmon Enhancement and for Fisheries Excellence, U.S. Department of Commerce for Innovative Research, and the NOAA Fisheries Distinguished Career Award. Bill retired at the end of December, but retains a quasi-emeritus status at his laboratory. Among his fondest memories within the NPAFC community has been sport fishing for salmon in Alaska with other scientists.

I attended NPAFC’s first scientific symposium held in Sapporo, Japan, in October 1996. That event provided me opportunities to converse with then-NPAFC Executive Director, Irina Shestakova, who had a poster next to mine, to hear an excellent talk on parasite tags for salmon stock identification by Leo Margolis, and to attend memorable parties in the homes of Japanese scientists and a wonderful field trip to the Chitose Hatchery where a delicious outdoor salmon barbecue was served.

Another among my many NPAFC memory highlights was a visit with Ki Baik Seong and his colleagues at the Youngdong Inland Fisheries Research Institute (recently renamed the Yanyang Salmon Station) in Yangyang-gun, Korea, where I had the opportunity to better understand Korean salmon issues and the privilege of helping spawn Korean chum and masu salmon.

I remember the NPAFC meeting in Nanaimo involved dinner at a pub where each country had to sing for their food. The U.S. participants held back until last, deciding on a rendition of “O Canada” under the skilled direction of Arlene Tompkins. I’ll just say the quality of the food far exceeded the quality of our singing, even with Arlene’s skilled directing!

My first involvement in NPAFC was submitting Document 154 that provided a 1992 estimate of the total hatchery releases of juvenile salmon into the North Pacific Ocean. Since then the Committee on Scientific Research and Statistics (CSRS) has provided an annual update of similar data showing that for the past 20 years the number of hatchery releases has consistently hovered around 5 billion juveniles per year. These hatchery release levels have fostered ongoing lively discussion among scientists over interactions among hatchery and wild salmon stocks in the ocean.

Closely related to hatchery-wild fish concerns is the principle of ocean carrying capacity for salmon. But what exactly is ocean carrying capacity? How do you define it? How do you measure it? Is it cyclic, or stable, or does it fluctuate year to year? And how does carrying capacity relate to other fishes and upper trophic level organisms? After all, salmon aren’t the only fish in the ecosystem!

These tough questions remind me of a vigorous discussion I had on this topic with Oleg Gritsenko, from Russia, at an NPAFC meeting. Following a few libations and some discussion of ocean salmon, Oleg said, “Bill, trying to describe ocean carrying capacity is like trying to catch a moonbeam in a jar.” I think Oleg’s comment was well said.

Nonetheless, we now know how many juveniles are released by species and regions and we also know annual commercial harvest by species and regions. A missing and crucial link to hatchery-wild fish discussions is the lack of comprehensive understanding of the composition and proportion of wild and hatchery fish in different ocean regions and in commercial harvests around the Pacific Rim. I know obtaining this information involves costly research to mark sufficient numbers of hatchery juveniles along with adequate sampling of salmon at sea and in commercial harvests, but this type of cooperative effort would be a worthy future goal for the member scientists under leadership of the NPAFC.
George Hungerford was born and raised in Vancouver, Canada. He was the first chair and founding board member of the Pacific Salmon Foundation, which was created to save wild salmon. The Pacific Salmon Foundation has become the leading salmon conservation and enhancement organization on the North American Pacific Coast and provides oversight to the Foundation’s team of professionals and support for a grass-roots movement involving over 30,000 volunteers and streamkeepers around British Columbia. George is also the Past Chair and a Director of the Pacific Salmon Endowment Fund Society, which is an endowment fund to conserve and enhance Pacific salmon. He is a lawyer and a partner in Hungerford Properties, a real estate investment firm in Vancouver. George is an Officer of the Order of Canada (Canada’s highest civilian honour) and a Queen’s Counsel (professional recognition for distinguished service in the legal field). He is also an Olympic Gold medallist in rowing, having won Canada’s only Gold Medal of the 1964 Tokyo Olympic Games in the Pair-Oars without Cox (two people propel the rowing shell, each person having one oar). George lives in Vancouver and enjoys his family’s summer home on the Pacific Coast where he and his wife, children, and grandchildren enjoy fishing and water sports.

Shigeto Hase graduated from the Fisheries Faculty of Hokkaido University where he studied marine ecology. In 1981 he joined the Fisheries Agency of Japan (FAJ) where he coordinated fisheries research for the INPFC (International North Pacific Fisheries Commission). He worked at the INPFC from 1991 to 1993, first as Assistant Director and later as Executive Director. On February 24, 1993, in the middle of a blizzard, he attended the NPAFC Inaugural Meeting in Ottawa and was named its interim Executive Director. Shigeto and his family enjoyed life in Canada very much. The Secretariat was then located on the University of British Columbia campus, and he and Wakako Morris often enjoyed playing tennis at lunch time. Despite being younger in those days, neither developed the skills needed to become tennis legends. After returning to Japan in 1994, Shigeto worked on domestic fisheries management for local government (Miyazaki prefecture of Kyushu Island) and at FAJ in Tokyo. In October 2012 he became the chief Counselor of FAJ and was appointed a Japanese Representative of NPAFC. His migration back to NPAFC took almost 20 years, far longer than the return migration of any salmon species. He now lives with his wife and daughter in Chofu City, Tokyo, where he was born and raised. His favorite things include playing and watching football, soaking in hot springs (experience of the Japanese-style “onsen” is good!), and seeing the recent birth of his first grandson.

JU KYOUNG KIM -- NEW REPRESENTATIVE OF KOREA

Ju Kyoung Kim was born in Gangneung, Gangwon, Republic of Korea. After obtaining Bachelor’s and Master’s degrees, his studies continue in the doctoral program in Marine Biotechnology at the Graduate School of the Gangneung-Wonju National University. Currently he is a researcher at the Yangyang Salmon Station of the Korea Fisheries Resources Agency where he manages the salmon production section. In addition to his research on salmon production, Ju Kyoung also investigates the migration of salmon in the area of Korea’s east coast. He started participating in NPAFC annual meetings in 2011, and in 2012 Ju Kyoung was named a Korean Representative of NPAFC.

TERRY TEBB -- NEW REPRESENTATIVE OF CANADA

Terry Tebb transformed his Certified Management Accountant (CMA) education into an exciting fisheries management career with Canada’s Department of Fisheries and Oceans (DFO). With more than 36 years of federal public service, he has held numerous diverse positions including Regional Comptroller of the Pacific Region and Head Research Manager of the Aquaculture Division at the Pacific Biological Station; Regional Director in the Management Services Branch, Pacific Region; Director of Operations for the Canadian Coast Guard, Pacific Region; Acting Regional Director of Fisheries Management, Pacific Region; Special Advisor to the Assistant Deputy Minister of Fisheries Management in Ottawa; and Assistant Commissioner of the Canadian Coast Guard, Pacific Region. In 2006 Terry retired from DFO. Since then, he has served as Vice President of Operations and Chief Operating Officer of the Pacific Salmon Foundation, allowing him to apply his broad fisheries background, leadership, accounting, and communications knowledge to the Foundation’s salmon conservation mission.

BUNDO YOON -- NEW REPRESENTATIVE OF KOREA

Bundo Yoon graduated from the Department of Fisheries at Pukyong National University, Republic of Korea, and in 1995 started his career working at the Planning and Promotion Office of the National Fisheries Research and Development Institute (NFRDI) under the Ministry for Fisheries. In 1998 he moved to the Ministry of Fisheries headquarters where he worked in several fisheries-related departments, including the Department of Offshore and Inland Fisheries, Department of Domestic Fishery Policy, Department of Aquaculture, Department of Marine Environment Management, Department of Fisheries Resources Management, and several other departments. Bundo became Director of the International Fisheries Organization Division of the Ministry for Food, Agriculture, Forestry, and Fisheries (MIFAFF) in September 2011. As Director, his responsibility includes all the international fisheries organizations in which Korea is a member, and he participates in several major multilateral international fisheries meetings as Korea’s Head of Delegation.
Salmon in White Sauce
by Alexander Zavolokin

The following recipe and photos were provided by Alexander Zavolokin from the Pacific Research Fisheries Center (TINRO-Center). The recipe was invented by his wife Elena and it is based on the traditions of European cuisine with some Asian additives. Alexander suggests that any salmon species can be used, but they usually use chum salmon.

Method

1. Cut the salmon filet into chunks, pour lemon juice on the fish, and let it stand for 20 min (Fig. 1).
2. Chop egg yolks and cut dill and parsley into small pieces. Mix the yolks and herbs together with the sour cream (Fig. 2).
3. Add chopped garlic and soy sauce (or salt) to step 2 to your taste.
4. Fry fish in a frying pan with the vegetable oil (do not add salt to the fish).
5. Layer the fried fish (while still warm) with the sauce in bowl, or high-sided plate, starting and ending with the sauce (Fig. 3).
6. Let the dish stand for 1-2 hours, then cool it down in the fridge.
7. Enjoy! (Fig. 4)

Ingredients

- 700-1000 g salmon filet
- 500 g sour cream
- 2 yolks
- 2-3 cloves garlic
- 2-3 Tablespoons soy sauce
- Juice from a freshly squeezed lemon (half a lemon is enough)
- Cooking oil (several tablespoons; enough to sauté the fish)
- Dill and parsley to your taste

Alexander Zavolokin has been a research scientist in the Laboratory of Applied Biocenology of the Pacific Research Fisheries Center (TINRO-Center) since 2003, when he graduated from the Far Eastern State University in Vladivostok, Russia. While Alexander has broad scientific interests, the main areas of his research include carrying capacity of the North Pacific for Pacific salmon, significance of jellyfish in the ecosystems and economics of Russia’s Far Eastern Seas, and modeling trophic interactions in pelagic communities. He has authored approximately 90 scientific publications of which 53 are peer-reviewed. Alexander is actively involved in international scientific cooperation at NPAFC, where he represents Russia on the Science Sub-Committee and the BASIS Working Group, and at the North Pacific Marine Science Organization (PICES), where he is a member of the Jellyfish Working Group. Since 2000 he has regularly participated in marine research surveys, including NPAFC-related international cooperative cruises onboard the R/V Oscar Dyson in 2009 and 2011. Alexander enjoys team sports and plays soccer, paintball, and volleyball. He is a marine biologist who also loves fishing as a way to relax and reflect upon life, although (according to him) he seldom makes a big catch.
NPAFC 2012 Annual Report
Summary of the Commission’s major activities at the 2012 Annual Meeting and other NPAFC events will be available on CD-ROM and online in Spring 2013.

NPAFC Promotional Video
The video demonstrates the Commission’s enforcement and science activities. It is available in English, Japanese, Korean and Russian.
English: http://www.youtube.com/watch?v=C3JVBJhj6gVl
Japanese: http://www.youtube.com/watch?v=opqj1bru6XQ
Korean: http://www.youtube.com/watch?v=Sdbh6N17kO0
Russian: http://www.youtube.com/watch?v=iHkOmHfp6w

ENFO Meeting (2013)
Morris J. Wosk Centre for Dialogue
Simon Fraser University
Vancouver, B.C., Canada
March 26-27, 2013

CSRS Meeting (2013)
Sheraton Princess Kaiulani
Honolulu, Hawaii, USA
April 23-24, 2013

NPAFC Third International Workshop on Migration and Survival Mechanisms of Juvenile Salmon and Steelhead in Ocean Ecosystems
Sheraton Princess Kaiulani
Registration Now Open
April 25-26, 2013
http://www.npafc.org

RECENTLY RELEASED

NORTH PACIFIC ANADROMOUS FISH COMMISSION
3rd International Workshop on Migration and Survival Mechanisms of Juvenile Salmon and Steelhead in Ocean Ecosystems
April 25-26, 2013
Sheraton Princess Kaiulani
Honolulu, Hawaii, USA
REGISTER NOW at www.npafc.org

Invited Speakers
Vladimir Radchenko (Vladivostok, Russia)
Marc Trudel (Nanaimo, Canada)
William Heard (Juneau, USA)

Objectives
• Identify ecological mechanisms regulating production
• Integrate information on environment and production during critical life history stages
• Relate variation in abundance, growth, and survival to climate-induced changes in habitat
1. Seasonal distribution and migration route/timing
2. Hydrological characteristics, primary production, and prey resources
3. Trophic linkages, growth rates, and predation rates
4. Ecological interactions among species and populations
5. Survival rate and survival mechanisms
6. Survival and salmonid ecology during the first winter at sea

Topics
Joseph Orsi (Auke Bay Laboratories, USA; Organizing Committee Chairperson); Kwan Eui Hong and Ju Kyoung Kim (Yangyang Salmon Station, Korea); Marc Trudel (Pacific Biological Station, Canada); Shigehiko Urawa (Hokkaido National Fisheries Research Institute, Japan); Alexander Zavolokin (Pacific Scientific Research Fisheries Center; Russia); Nancy D. Davis (NPAFC Secretariat)

Organizing Committee

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Visit the NPAFC website: http://www.npafc.org for more information on events, publications, scientific documents, and salmon catch statistics.

The Commission encourages submission of articles and images on NPAFC-related activities for publication in the newsletter.

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