The Kamchatka Research Institute of Fisheries and Oceanography will celebrate its 80th Anniversary in 2012. Originally named the Kamchatka Branch of TINRO, it has been known as KamchatNIRO since 1995. Its focus on direction and management of all fisheries research projects involving Kamchatka waters adjacent to the North Pacific, Okhotsk and Bering seas, and Kamchatka’s freshwater basins has made KamchatNIRO one of the major research centers in the Russian Far East.

Since KamchatNIRO began in 1932, biological studies of Pacific salmon have played an important role in its scientific work. For people living in Kamchatka, salmon was historically the basis and source of life, and it remains an extremely valuable economic asset for the region. Because of this, one of the major goals of the institute’s research program is to enhance and provide for a stable and sustainable salmon resource.

During the 1930–1940s, salmon studies focused primarily on the freshwater basins of Kamchatka. During this time, scientists began to understand that efficient management of salmon resources should be supported by marine research. In 1955 marine salmon studies were initiated and the first trial research expedition to the northwest North Pacific was organized to collect salmon using driftnet fishing gear. It was during the course of this initial expedition that scientists realized marine studies should be conducted annually. Interest in marine salmon studies culminated in August 1960 with creation of the laboratory of Marine Salmon Investigations (MSI).

The MSI laboratory was organized and first supervised by fish biologist I. B. Birman, who headed the laboratory from 1960 to 1979, and then by trophologist L. D. Andrievskaya, who was in charge from 1979 to 1991. Under their supervision the first data were obtained on marine biology and ecology of Asian juvenile and adult salmon (Fig. 1). Standardized marine research came to include surveys in the northwest North Pacific (January-June), and in the Bering, Okhotsk, and Japan seas (January-November). In the 1960-1980s, these surveys were conducted each year using gillnets to catch salmon. As survey methods developed and became standardized, the first scientific monographs were published and remain relevant today, including “Feeding by Pacific salmon in their marine period of life” by L. D. Andrievskaya (1975) and “Marine period of life and matters of stock dynamics of Pacific salmon” by I. B. Birman (1985).

In 1974 as research in offshore waters of the North Pacific continued, initial studies investigating juvenile salmon in estuaries and coastal waters of Kamchatka were initiated using a variety of gear, including haul and purse seines, pair trawls, and lift nets accompanied with lighting. These juvenile fish studies continued through the 1990s and helped immensely to inform our...
understanding of the importance of environmental conditions on the early marine life and subsequent abundance of adult Kamchatka salmon. The primary organizer of this study was V. I. Karpenko. He published a monograph summarizing results of these studies in “Early marine period of life of Pacific Salmon” (1998) and headed the MSI laboratory from 1991 to 1998. V. V. Maximenkov’s 2007 monograph “Feeding by and trophic interactions of juvenile fishes inhabiting river estuaries and coastal waters of Kamchatka” was also based on data from studying trophology of juvenile salmon during the early marine period.

In 1981 scientists at KamchatNIRO began using pelagic trawls to assess stock abundance and study juvenile salmon biology during fall migrations (September-October). During this time, researchers continued to use research gillnets in the spring and summer months. Two standard study areas were selected for trawl surveys: one in the eastern Okhotsk Sea and the other in the southwestern Bering Sea (Fig. 2). Based on data generated from juvenile surveys in the 1980–2000s, KamchatNIRO scientists developed methods to forecast salmon runs. Initially forecasts were developed for pink salmon runs to west and east Kamchatka; later forecasts were developed for other runs of fish. V. G. Erokhin, who has headed the MSI laboratory since 1998, described these methods in “Biology of juvenile Pacific salmon in Kamchatka waters of the Okhotsk Sea” (2002). The methods developed by KamchatNIRO salmon researchers for monitoring salmon off the Kamchatka coast are used in annual joint TINRO-Centre and KamchatNIRO research cruises currently being conducted in the summer and fall.

In 2004 a new salmon research project was launched to study the coastal waters off Kamchatka using the trawler R/V MRTK–316 (owned by KamchatNIRO). The purpose of this project was to estimate juvenile salmon stock abundance for West Kamchatka (Ozernaya and Kamchatka rivers) pink and sockeye salmon, and to study how environmental conditions affect early marine life-history. Two new trawls (vertical opening 8 and 12 m) were developed at KamchatNIRO to allow for operations at shallow depths. The survey areas during the May-August studies include the coastal waters of the Okhotsk Sea (West Kamchatka) and the Kamchatsky and Kronotsky gulfs (East Kamchatka; Fig. 3). As a result of the information gained in the 2004-2010 surveys, adjustments have been made to the fishing methods used in shallow coastal waters. Surveys used optimal trawl models and survey timing to obtain new data on the biology and ecology of juvenile salmon during the early marine period in Kamchatka coastal waters.

Current Pacific salmon research cruises by KamchatNIRO scientists occur on an annual basis in the Okhotsk and Bering seas, and in the northwestern North Pacific Ocean. This research includes studies on the following topics (Fig. 4):

- Stock abundance and migration of juvenile and adult salmon during the spring-fall period based on trawl and driftnet surveys;
- Salmon marine habitat (hydrological conditions, phytoplankton, zooplankton, etc.);
Salmon biological parameters (body length, weight, sex ratio, age, stage of maturation, etc.),
Salmon feeding and trophic interactions;
Histological and physiological aspects of salmon early marine and pre-spawning life-history;
Infections by parasites and morphological pathology of salmon;
Predation on salmon;
Salmon stock identification in mixed-stock catches on the basis of scale and genetic analyses.

KamchatNIRO scientists participate annually in joint research cruises with TINRO-Center researchers in winter, summer, and fall. These studies are coordinated with other research programs, such as BASIS, through NPAFC science plans.

Data generated by annual surveys are used to produce forecasts and make harvest adjustments for salmon runs to the coasts of Kamchatka, including pink and sockeye salmon returning to West Kamchatka, and pink salmon returning to East Kamchatka (Fig. 5). Years of sustained research and effective subsequent regulation have helped KamchatNIRO to provide efficient salmon fisheries and maintain sustainable stock abundance (Fig. 6).

Maxim Koval graduated from the Far East Technical University of Fish Industry (Vladivostok) specializing in fish biology. After finishing university, he began work at the laboratory of Marine Salmon Investigations (MSI) at KamchatNIRO. In 2007 he completed his PhD with the dissertation “Forage base and feeding particularities of Pacific salmon in the Kamchatkan waters of the Okhotsk and Bering seas and in the northern part of the Pacific Ocean.” Since 2008 he has supervised the division of oceanographic research at KamchatNIRO.

Every year since 1994 he has been a participant in marine research surveys, including NPAFC-related international cooperative cruises onboard the R/V Kaiyo maru during winter 1996 and 1998, and the R/V Sea Storm in fall 2001. Since 2007 he has organized and conducted research on multipurpose marine expeditions for studies of juvenile salmon in coastal Kamchatka waters. Maxim is the Russian member of both the NPAFC Working Group on Salmon Tagging and the BASIS Working Group. His scientific interests include the study of salmon marine biology and ecology, structure and dynamics of plankton communities, forage conditions and feeding of marine fish, and biological production in marine ecosystems.
I officially retired on May 27 of this year. I did not stop work; I only adjusted my priorities and reduced my expectations. Research is simply too much fun to give up. Things that many people save for retirement, I did as part of my job and many of these adventures were associated with INPFC and NPAFC. I think my first meeting was in 1977 and I never missed a meeting after 1977. Last year was almost a miss, but my nurse (my wife) and I made it to the annual meeting in Korea. This year’s meeting is in Nanaimo and I am not on the official Canadian delegation. However, I plan to show up from time to time.

I met some remarkable people during my involvement with INPFC and NPAFC. Some are no longer with us, but it is only their physical presence that is gone. When I started with our organization, there was a level of confrontation among countries. Over time, this ended and changed to a commitment to cooperation that is a model for international organizations. BASIS probably was the concept that turned NPAFC into a team of integrated researchers that share information in order to develop the best management possible for Pacific salmon. The science is important, but, again, it is always the people that stand out. Everyone in NPAFC helps each other. Everyone is concerned about their colleagues in other countries particularly when there are health issues or national disasters.

Our colleague, Vladimir Karpenko once talked me into writing about my visits to Russia. The story was published in a volume produced for an anniversary of their institute. However, rather than write about my adventures in smoke alley in Tokyo or at the Great Alaska Bush Company in Anchorage or looking for antiques in Seoul, I want to write about the importance of the science that is conducted and exchanged within NPAFC. Government supported science is expensive. However, the answers that we all need to manage Pacific salmon into the future can only be produced with government support because
Dr. Richard (Dick) Beamish was born in Toronto, graduated with a PhD from University of Toronto, and completed his post-doctoral studies at Woods Hole Oceanographic Institution. His career with Fisheries and Oceans Canada started at the Freshwater Institute in Winnipeg, and by the mid-1970s he moved to the Pacific Biological Station (PBS) in Nanaimo. While at PBS, Dick was Head of the Groundfish Section (1977-1979) and led the station as its Director (1980-1992). He has received many awards for scientific achievement including the Order of Canada, in recognition for discovery of acid rain, and the Order of British Columbia, for discovering some Pacific fish species can live to be very old. He is a Fellow of the Royal Society of Canada and recently became the first foreign scientist named as an honorary member of the Pacific Research Fisheries Center (TINRO-Center) in Vladivostok. In 2008 Dick was awarded the Demel Medal by the Sea Fisheries Institute in Gdynia for scientific achievement and popularizing knowledge of marine ecology and fisheries.

Dick's research publications have included pioneering works on climate regimes, regime shifts, and the effects of climate on fish populations. He has identified a new species of freshwater fish in British Columbia and studied its evolutionary relationships. In May 2011 Dick retired from PBS where he will continue as Emeritus Scientist and be involved in fisheries research. His plans include more free time for his numerous hobbies including enjoyment of his garden of rare and spectacular rhododendrons.
Over the spring and early summer, I was involved in the production of the latest hard copy version of the NPAFC 2005-2007 Statistical Yearbook and updates through 2009 of the web-based statistics. This provided an opportunity to learn about current catch and release trends of North Pacific salmon. My objective in this summary is to highlight catch trends and indicate anadromous stock status reports recently prepared by researchers.

Based on overall catch statistics, the stock status of North Pacific salmon is characterized as being in a favourable condition. For example, stock status has recently been reported as, “highest on record”¹, at a “high level of abundance”², and “very healthy”³.

The total commercial catch of anadromous fish by NPAFC member countries in 2009 was 1.1 million tonnes; the highest recorded since 1993 (Fig. 1). Major catches in 2009 were reported by Russia (552 thousand tonnes), United States (Alaska; 332 thousand tonnes), and Japan (219 thousand tonnes). Pink (608 thousand tonnes) and chum salmon (359 thousand tonnes) constituted the majority of the catch, followed by sockeye (147 thousand tonnes), coho (20 thousand tonnes), and Chinook salmon (6 thousand tonnes) (Fig. 2).

Commercial catch data can be separated into stocks originating in the northwest (Japan, Korea, and Russia) and northeast Pacific (Canada and US; Fig 3). Salmon abundance can differ between the two regions: the northwest Pacific catches higher amounts of pink and chum salmon than the northeast. The high commercial catch in 2009 was generated mostly by commercial catches of pink salmon in the northwest Pacific (Fig. 4). In this region, pink salmon, known for its alternating-year abundance cycle⁴, has shown high production in odd-numbered years since 2001 and the
harvest in 2009 increased by 50% over what it was in 2007. The northwest region produces approximately 80% of total North Pacific chum salmon catches (Fig. 5).

In contrast, the northeast North Pacific produced higher catches of sockeye, coho, and Chinook salmon (Figs. 6-8). Alaskan fisheries generally target chum, pink, and sockeye salmon and catches have been relatively high since 1993. Although overall commercial catch of these species in North America has been highly stable for the past decade, Chinook and coho salmon catches are decreasing in southern British Columbia and the US Pacific Northwest.

Recent studies have reported that fluctuation in salmon abundance, growth, or survival is associated with climatic regime shifts. It has been suggested these environmental changes are linked to salmon populations by changing water temperature and salmon prey abundance. The current high abundance of North Pacific salmon is likely related to favourable conditions for northern stocks associated with an oceanic regime starting in 1989.

Current high salmon production may also result from increases in the quantity and quality of salmon hatchery production. In 2009, salmon hatcheries released nearly 4.8 billion salmon into the North Pacific, mostly released from Japan (41.2%), United States (33.7%), and Russia (18.8%), followed by a much lesser degree by Canada (6.2%) and Korea (0.1%, Fig. 9). Most salmon hatchery releases were chum (62.6%) and pink salmon (27.8%), followed by sockeye (4.7%), Chinook (3.2%), and coho salmon (1.3%). Survival of hatchery releases may contribute to the total stock size of adult fish. However, some view high salmon abundance, especially in Asia, to be more closely related to climate change than to increased hatchery releases, or at least a combination of both factors. In recent years, the number of hatchery releases has been decreasing in the US Pacific Northwest and British Columbia, probably due to the focus on conservation of wild stock.

Wild juveniles might have higher survival rates than hatchery fish in a stressful marine environment, and it is reasonable to prepare for future climate change by focusing on conservation of wild runs, particularly in regions near the southern limits of salmon distribution.

One might ask “what if salmon abundance was to approach or exceed...
carrying capacity?" Although Pacific salmon can cover vast areas of the ocean during their migration, exceeding carrying capacity could result in something similar to putting too many fish in one water tank: decreased food and increased stress. Studies of Hokkaido chum salmon suggest that under some conditions, increases in fish population result in smaller adult size and increased age of maturity. With an eye to minimizing the decline of economic yields from salmon, future hatchery projects should be carefully considered.

In summary, recent statistical data show us there are still regional stocks that warrant concerns despite high total commercial salmon catches by NPAFC member countries. It is likely that the historically high pink and chum salmon stock abundance is at least partially generated by the present favourable climate regime. Improved hatchery practices also likely contribute to high salmon abundance. Catches of sockeye, coho, and Chinook salmon in British Columbia and the US Pacific Northwest are decreasing, where hatchery releases are lower and there is growing concern for wild-run conservation.
Ms. Yuka Ogata was born in Niigata, Japan. Her interest in the natural world started in childhood with an early skill in catching crawfish from local ponds. She later went on to complete a BA in Oceanography from Tokai University and a MS in Agriculture from University of Tokyo. She is currently a PhD candidate at University of Tokyo in the Department of Global Agricultural Sciences where she will soon complete her studies on developing culture techniques in Southeast Asia for zooplankton (rotifers), which is a critical live food source for first-feeding larval fish used in fish farming.

Yuka joined the NPAFC Secretariat in January, 2011, for six months as its first intern. During her stay in Vancouver, Yuka could often be found jogging the circuit in Stanley Park, visiting local antique shops in her quest for vintage kitchenware, or following her favourite local ice hockey team.

References and notes
2. R. Beamish, NPAFC Bull. 4, 1 (2007)
4. Pink salmon have genetically distinct runs in alternate years because of their prescribed 2-year life-cycle.
5. V. Radchenko, O. Temnykh, V. Lapko, NPAFC Bull. 4, 7 (2007)
INTERNATIONAL WORKSHOP ON
EXPLANATIONS FOR THE
HIGH ABUNDANCE OF
PINK AND CHUM SALMON
FUTURE TRENDS

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Vancouver Island Conference Centre
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TOPICS
1. Production trends by region
2. Hatchery production
3. Marine migration and distribution patterns
4. Feeding, growth, and survival strategies
5. Ecological capacity for wild and hatchery production in the ocean
6. Prediction and management of salmon production in a changing climate
7. Future research

FEATURING PROMINENT EXPERTS

Richard Beamish (Nanaimo, Canada)
Alexander Kaev (Yuzhno-Sakhalinsk, Russia)
Kontaro Morita (Sapporo, Japan)
Greg Ruggiero (Seattle, USA)
Alex Wertheimer (Juneau, USA)

William Heard (Juneau, USA)
Yury Khokhlov (Anadyr, Russia)
Joe Orsi (Juneau, USA)
Evgenii Shevlyakov (Petropavlovsk, Russia)
Masahide Kaenyama (Hakodate, Japan)
Suam Kim (Busan, Korea)
Vladimir Pazhenko (Moscow, Russia)
Shigeiho Urawa (Sapporo, Japan)

Workshop Wrap-Up James Balsiger (Juneau, USA)

ORGANIZING COMMITTEE
Richard Beamish (Pacific Biological Station, DFO, Canada)
Alex Alexander Bugaev (Khabarovsk Fishery and Oceanography Research Institute, Russia)
Sanee Chiba (Japan Agency for Marine-Earth Science and Technology, Japan)
William Crawford (Institute of Ocean Sciences, Canada)
Nancy Davis (NPAFC Secretariat)
Edward Farley (Auke Bay Laboratories, USA)
Toru Nagasawa (National Salmon Resources Center, Japan)
Ki Baik Seong (Cold-Water Fish Research Center, Korea)
Total commercial catches of Pacific salmon (*Oncorhynchus* spp.) in the Subarctic North Pacific are at historic high levels, with recent catches over one million tonnes. High catches were caused by an increase of pink and chum salmon production, which represented over 80% of the total catch. At the same time Chinook, coho, and masu salmon have been decreasing in abundance. These trends in Pacific salmon catches are generally recognized to result from processes within the ocean that appear to improve the capacity to produce pink and chum salmon, perhaps decrease the capacity to produce Chinook and coho salmon, and contribute to recent extreme variability in sockeye salmon production. Understanding how future trends in ocean production capacity will change is particularly important for hatchery programs. The Workshop will bring together international experts to identify what is known about the reasons for recent production trends and to identify future research needs.

The two-day program includes 33 oral presentations from international salmon scientists from the major chum and pink salmon producing areas of the North Pacific Rim including Japan, Republic of Korea, Russia, US, and Canada. There will be a poster session and reception and opportunities for informal discussion among the meeting participants.

**Schedule**

**October 29 (Saturday)**
- 09:00-18:00 Optional Bus Excursion (Goldstream Provincial Park, City of Victoria; *additional fee*)
- 17:00-19:00 Pre-Registration (Shaw Lobby, Vancouver Island Conference Centre)

**Workshop**

**October 30 (Sunday)**
- 08:00-12:00 Registration (Shaw Lobby, Vancouver Island Conference Centre)
- 09:00-17:00 Oral Presentations (Shaw Auditorium, Vancouver Island Conference Centre)
- 17:30-18:30 Poster Session (Shaw Lobby)
- 18:30-20:30 Reception (Newcastle Island Lobby, Vancouver Island Conference Centre)

**October 31 (Monday)**
- 08:30-17:00 Oral Presentations

**Registration Fee** (Canadian dollars):
- Regular Fee $150
- Student/Retiree $75
- Student (without reception) $25

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On February 23-24, 2011, member countries met for the Enforcement Evaluation and Coordination Meeting (EECM), in Honolulu, Hawaii. They discussed enforcement and coordination plans for 2011 high-seas driftnet patrols by ship and aircraft in the NPAFC Convention Area. An observer from the Western and Central Pacific Fisheries Commission (WCPFC) also attended the meeting.

There were a variety of topics covered in anticipation of the 2011 patrol season. Japan informed the group about aircraft patrols that took place during fall, 2010, and provided a tentative scheme for patrol vessel and aircraft enforcement efforts for 2011. Korea expects to make extensive port-side inspection of vessels suspected of engaging in illegal salmon fishing, and to accommodate port inspection requests from third parties. Information obtained from Canada’s Radar Satellite II (RS2), which is used to augment information on location and identity of vessels during enforcement patrols in the Convention Area, will be available to the other members of NPAFC when operationally practical.

Despite a recent decline in sightings of high-seas driftnet fishing activities, the United States reiterated in the 2011 threat assessment report that the threat of illegal driftnet fishing remains. The US Coast Guard plans include ship and aircraft patrols in the Convention Area and frequent broadcasts to mariners requesting that high-seas driftnet sightings by commercial vessels in the North Pacific be passed to the Coast Guard. Russia outlined its plan for ship and aircraft patrols and discussed an operational rendezvous with a US enforcement vessel. Recent updates of the Integrated Information System (IIS) database were demonstrated for meeting participants.

A scientist from the US National Fisheries Service showed the EECM members conceptual models of seasonal ocean migrations of Pacific salmon and thermal limits to their distribution to assist the group in planning how best to target patrol efforts and reviewed how to collect fish samples for stock identification.

Other topics discussed by the group included prioritizing recommendations from the NPAFC performance review relevant to the enforcement objectives of the Commission. Actions implementing the recommendations will be reviewed at the 2011 Annual Meeting. Procedures for developing an Illegal, Unregulated, and Unreported (IUU) vessel list were discussed and a final draft will be submitted for approval at the next annual meeting, and possible implementation in 2012. After the EECM concluded, participants took part in an excursion to the Honolulu Fish Market and Aquarium and an informative visit to US Coast Guard facilities and the cutter Jarvis.

Jun Imamura
ENFO Chairperson

Mr. Jun Imamura was born in Tokyo where he graduated from the Tokyo University of Fisheries. Initially, he worked at the National Salmon Resources Center in Hokkaido, but later became a Fisheries Inspector at the Fisheries Agency, where he participated in enforcement patrols. More recently, he was promoted to be the Director of the Enforcement Division at the Hokkaido Fisheries Coordination Office. In 2009, Jun assumed his current position as the Assistant Director of the Enforcement Office at the Fisheries Agency. In this position, he is responsible for fisheries enforcement policy development for Japan, and his duties include coordinating enforcement operation planning. Jun’s daily activities include a rigorous workout and training regimen that enables him to eat and drink as much as he likes without worrying about his health. He currently resides in Tokyo with his wife, son, and daughter.
This year’s Research Planning and Coordinating Meeting (RPCM) was conducted on a trial basis by email with the hope of economizing expenses. The meeting took place from April 11 to 19, 2011, and meeting participants made great efforts to help the meeting run smoothly and efficiently. The meeting’s purpose was to coordinate research and salmon survey plans for the 2011 field season.

Following the 2011-2015 NPAFC Science Plan theme “Forecast of Pacific Salmon Production in the Ocean Ecosystems under Changing Climate,” various national research plans were presented, and 2011 survey activities, ship schedules, and samples and data exchanges were reviewed. Canada’s ocean salmon research program will focus on understanding processes regulating production in the marine environment and interactions between wild and hatchery-reared salmon. Five trawl surveys in 2011-2012 are proposed for the Strait of Georgia and the west coast of British Columbia. Japanese research vessels will conduct surveys to obtain data on salmon abundance, distribution and ecology in the Bering Sea, and the central and western North Pacific Ocean. Three vessels will conduct salmon surveys using a variety of fishing gear, including trawl, gillnet, longline, and hook-and-line. Russia described salmon research cruise plans using trawl surveys in the Bering Sea, Okhotsk Sea, and western North Pacific Ocean. These surveys will include cruises in late winter, summer, and autumn to estimate salmon survival at different stages of marine life. The US presented cruise plans for trawl surveys during spring-summer in Southeast Alaska and during summer-autumn in the Gulf of Alaska and eastern Bering Sea. The objective is to study marine habitats and ocean ecology of juvenile salmon and associated pelagic fish communities. Two working groups with responsibilities for 2011 research planning reported on their efforts to coordinate research plans. These included salmon otolith marking plans for brood year 2011, updating the otolith mark database, discussing high-seas salmon tagging plans for the 2011 field season, and compiling information on recently recovered tags.

Meeting participants were informed about plans for the upcoming international workshop, “Explanations for the High Abundance of Pink and Chum salmon and Future Trends.” The workshop is scheduled for October 30-31, 2011 in Nanaimo, BC (see announcement, this issue). Scientists specializing in studies of ocean pink and chum salmon abundance across a variety of geographical regions have been invited to give oral presentations at the workshop.

An update was also provided to meeting participants on the status of prioritized recommendations and the list of actions pertaining to scientific research from the NPAFC performance review.

The email meeting format will be evaluated at the upcoming annual meeting.

Jin Yeong Kim
CSRS Chairperson

Dr. Jin Yeong Kim is a fisheries scientist at the Korean Fisheries Research and Development Institute (NFRDI). Her scientific studies have concentrated on larval recruitment and fish biology of small pelagic fish populations. Most of her career has been devoted to scientific committees of bilateral or multilateral cooperative fisheries organizations of the North Pacific Rim and to the Coordinating Committee of the Korean Central Fisheries Program. In 2006-2008, she served as Director of the Fisheries Resources Department of NFRDI and in 2009 became the Director of the East Sea Fisheries Institute of NFRDI. In her current position, Jin resumed her scientific research of fisheries resources in Korean waters.
Many salmon return to their home river during the summer and fall months. I will also return to my home in Japan by mid-summer. My experience as an intern at NPAFC was surely worthwhile for me, and it feels bitter-sweet to be going home after my great experience and leaving behind the wonderful people I have come to know over the last six months. During my internship I spent time compiling, formatting, and updating web-based statistical data and had an opportunity to exercise my creative energy by composing and designing a new NPAFC pamphlet intended to inform the public about the Commission. My internship has provided me with a unique opportunity to understand Pacific salmon and the work of the Commission. It was interesting to see how the five member-nations cooperate to achieve a mutual goal, and observe how scientists deal with fish that migrate for better habitat without concern for human borders and territories. During the course of my graduate studies I have been lucky enough to visit distant places that have given me the chance to learn many things from great local people and events. I would say I’ve enjoyed the rain in Vancouver and counting electronic salmon, as much as I’ve enjoyed the heat in Laos and counting tiny rotifers under a microscope. I always come to miss these unique experiences after I have left a place and had the chance to reflect on it. I would like to express many thanks to the NPAFC Secretariat staff for their kind mentorship and to the Commission for making this valuable experience possible for me.

Yuka presents NPAFC-related materials on her last day at the Secretariat.

Photo by NPAFC Secretariat

Yuka Ogata
2011 NPAFC Intern

Time will be set aside at the 19th Annual Meeting in Nanaimo for the 2011 NPAFC high-seas salmon tag reward drawing. The purpose of the drawing is to encourage the public to report recoveries of NPAFC high-seas tags. Information from tag returns increases stock-specific information on the distribution and migration of salmon and steelhead at sea. The drawing will select the winners from among fisherman, processors, sports fishermen, and the general public who return high-seas tags between October 15, 2009 and October 7, 2011. CDN $1000 will be divided among three lucky winners. The first prize is $500, the second prize is $300, and the third prize is $200. If you find a high seas tag:

- collected the tag, or record the tag number and description if you cannot collect the tag
- record the recovery location, date, gear, fish species, sex, length and weight
- collect scales from both sides of the fish just slightly above the lateral line and place them into folded paper (see poster)
- send the tags with your name, address, and phone number to the national contact person listed at [http://www.npafc.org/new/science_fishtag2.html](http://www.npafc.org/new/science_fishtag2.html), or contact the NPAFC at [http://www.npafc.org](http://www.npafc.org)
Return High-Seas Tags to Enter Drawing by OCTOBER 7, 2011

Please send tag and other information to:

**Canada**
M. Saunders - Email: mark.saunders@dfo-mpo.gc.ca

**Japan**
M. Fukuwaka - Email: fukuwaka@fra.affrc.go.jp
T. Nagasawa - Email: nagasat@affrc.go.jp

**Korea**
K.B. Seong - Email: salgeon@nfrdi.go.kr
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Kamchatkan Ukha (Fish Soup)

There are many ways of preparing Ukha and one universal idea. The best Ukha is always made of freshly-caught fish cooked on a fire. Of course when you live an urban lifestyle, you may not be allowed to cook it on a fire. But you can cook Ukha easily on the stove in your kitchen. An indispensable condition of Kamchatkan Ukha (besides using salmon) is a transparent broth and compact pieces of fish that are not boiled to softness. The technique is to put all the ingredients into the pot one-by-one and not to stir them in the pot during cooking. I usually use a big pot of 5-6 liters. All ingredients are given for this volume.

Ingredients
- salmon head, tail, ventral area with fins, and spine (optional)
- 1 tablespoon salt
- 3 bay leaves
- 1 large carrot, peeled
- 5-6 large potatoes, peeled
- 1 onion, peeled
- several sprigs of parsley, chopped
- several sprigs of fennel, chopped
- 2-5 pepper corns
- juice of 1/3 lemon
- 1-2 tablespoons vegetable oil (optional)

Method
1. Fill the pot half-full with cold water. Add salt and bay leaves to the pot and bring the water to a boil.
2. Meanwhile, clean the fish (do not scale it) and wash it in cold water. Cut off the head, tail, and ventral portion of the body with the fins. These parts will be used in Ukha. The rest of the salmon will be used for cooking the second meal. You can remove the spine and use it for Ukha, but the spine should be removed from the pot after the broth is ready (between step 4 and 5). Cut the head into two symmetrical parts (use the sagittal section) and cut the ventral area with fins into several single-size portions.
3. Chop carrot, potatoes, and onion into cubes in a size according to your wish. If you don’t like onion, put the whole onion (without chopping) into the water with the salt and bay leaves in Step 1 and remove the onion from the pot later when broth is ready.
4. When the water reaches a boil, add chopped carrot, potato, and onion one-by-one and return water to a boil.
5. Put the pieces of fish into the pot, but don’t stir. After the water returns to a boil again, add chopped parsley, fennel, pepper corns, and lemon juice. If the fish you used does not contain much fat, then you may wish to add some vegetable oil.
6. Remove pot from the heat and let stand for 20–30 minutes (Fig. 2) and have fun! This meal is delicious hot or cooled.

1 Ventral body area of the fish is the underside including the belly flap and ventral and anal fins.
2 To make a sagittal cut, place the knife on the head so the cut is oriented front to back and bisects the snout and top of the head.
From a Single Fish: Soup) & Stewed Vegetables

By: Alex Bugaev

The second meal – Salmon with Stewed Vegetables

As is the case for preparation of Ukha, there are many versions of how to cook salmon with stewed vegetables. I prefer a very simple cooking method because the more ingredients and seasonings we use, the less our understanding of what we eat.

Method

1. Chop carrot, peppers, tomatoes, and onion into small pieces in the shape and size according to your wish.
2. Put the chopped vegetables into a hot pan with some vegetable oil. Let vegetables cook for about 10 minutes until they are half-done.
3. While vegetables are cooking, sprinkle salmon with salt, pepper, and lemon juice.
4. Remove vegetables from the pan and add some more oil to the pan.
5. Roll the salmon pieces in flour and place them in the oil. Fry them on one side until lightly browned. Turn over the pieces of salmon and place the half-cooked vegetables on top of the salmon.
6. Cover the pan and let the fish and vegetables stew together for 10-15 minutes (Fig 3).
7. The meal is ready and fine when served with boiled rice.

Bon appétit!

Ingredients

salmon fillets cut into single-size portions (5-7 cm)
1 large carrot
2 sweet bell peppers (preferably one yellow and one red)
2-3 tomatoes
1 onion
vegetable oil
salt
pepper
lemon juice (enough to drizzle over salmon)
flour (enough to coat salmon)
**Recent Publications**

**Statistical Yearbook 2005-2007**
Hard copy of the Statistical Yearbook is published every three years. This issue includes annual catch statistics and numbers of released salmon fry and smolts in the North Pacific Ocean. The yearbook was published in late spring. Statistics available online.

**Promotional Pamphlet**
Provides general information on the mission, structure, and activities of the NPAFC. Also available online.

**NPAFC Annual Report 2010**
Including results of the Commission’s major activities such as Annual Meeting and other NPAFC events is now available on CD-ROM and online.

**Upcoming Events**

**NPAFC 19th Annual Meeting**
Vancouver Island Conference Centre
Nanaimo, BC Canada
October 23-28, 2011
* CSRS starts on October 23rd
  1st Plenary starts on October 24th

**NPAFC International Workshop on Explanations for the High Abundance of Pink and Chum Salmon and Future Trends**
Vancouver Island Conference Centre
Nanaimo, BC Canada
October 30-31, 2011

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