

NEWSLETTER OF THE NORTH PACIFIC ANADROMOUS FISH COMMISSION

Cooperative Enforcement Efforts on the High Seas

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The Commission invites you to submit articles and photos or slides on NPAFC-related activities for publication in the newsletter.

Masthead photo: Fisheries Research Institute (FRI) High-Seas Archives, University of Washington

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The North Pacific Anadromous Fish Commission enforces prohibition of direct salmon fishing in the North Pacific Ocean and its adjacent seas, north of 33°N latitude and beyond the 200-mile exclusive economic zones. Cooperative enforcement efforts resulted in the detection of several high-seas driftnet vessels in May 1998. From these sightings, four vessels were apprehended:

On 19 May, a US Coast Guard aircraft sighted at least five vessels driftnet fishing on the high seas, approximately 210 nautical miles off Russia's Kamchatka peninsula. The Coast Guard diverted two patrol vessels to the area. Additionally, the Russian government dispatched two patrol vessels. On 25 May, a Russian Federal Border Guard Ship intercepted and apprehended the driftnet vessel *Zhong Zin 37* for illegally fishing in the Russian EEZ. The Russian ship brought the fishing vessel into Petropavlovsk for prosecution. Russian patrol vessels later seized an additional vessel detected driftnet fishing illegally.

On 26 May, a US Coast Guard aircraft detected a fishing vessel recovering four nautical miles of driftnet outside of the Russian EEZ. The Coast Guard Cutter *Boutwell*, intercepted and initiated pursuit of the vessel. A People's Republic of China (PRC) enforcement official, aboard *Boutwell* in accordance with the 1991 Memorandum of Understanding between the US and PRC regarding implementation of the United Nation's moratorium on high seas driftnet fishing, confirmed that *Shen Shun* was of PRC flag and that the PRC government

desired US assistance in apprehending the vessel. *Boutwell* pursued until its enforcement team was able to successfully board the fishing vessel on 1 June—1350 nautical miles southwest of Attu, Alaska.

On 30 May, the US Coast Guard Cutter *Jarvis* arrived on the scene of reported driftnet activity. That morning, *Jarvis's* embarked helicopter detected F/V *Shan Yu 16*, also of PRC registry, retrieving a high-seas driftnet 12 nautical miles outside the Russian EEZ. *Jarvis* intercepted the vessel and initiated a pursuit that lasted until 3 June, when the vessel acquiesced to an enforcement boarding.

The US Coast Guard escorted both fishing craft to a rendezvous with a PRC patrol vessel, who took custody of the driftnet vessels and escorted them to the PRC for prosecution. The Russian government dispatched a ship to retrieve the driftnet abandoned by the four fishing vessels, estimated to total nearly 100 nautical miles in length.

Cooperative efforts will continue to identify and apprehend those vessels that defy the terms of the Convention.

—Greg Hitchen, US NMFS Enforcement



PRC driftnet vessel *Tai Sheng*

In March, the NPAFC Research Planning & Coordinating Group (RPCG) met in Vancouver, BC. Oleg Gritsenko of the Russian Federation and Chair of the Committee of Scientific Research and Statistics (CSRS) served as Chair of RPCG. The group reviewed the 1998 CSRS work plan; cruise activities; and exchange of biological samples, data, and personnel. Working groups discussed the science plan, methodology standardization, and stock assessment, and assigned tasks for completion by the 1998 annual meeting. Members discussed funding of joint projects: Japan proposed that CSRS recommend partial funding for scientists to participate in NPAFC's future scientific symposiums, and the USA proposed that CSRS recommend funding a symposium in conjunction with the 1999 annual meeting. The RPCG agreed with these proposals, and formed a Steering Committee to develop topics and prepare for the symposium.

1998 Research

Canada

Canadian high-seas salmon research includes surveys of the distribution of juvenile salmon in coastal and offshore regions of northern BC and southeast Alaska. Four surveys, spaced at monthly intervals, are examining the size, nutritional status, and growth of all species of Pacific salmon. A joint study with the US will survey juvenile salmon and conduct experimental fishing to compare the efficacy of trawl gear used by the *W. E. Ricker* and the US-chartered trawl vessel, *F/V Great Pacific*. Canada will also extend its high priority project to study climate impacts on the carrying capacity of the Strait of Georgia for coho and chinook and expand surveys off the west coast of Vancouver Island to monitor the impacts of El Niño. Canadian scientists are testing the hypothesis that the carrying capacity of salmon is determined in the early marine period and in the fall and winter of the first ocean year.

Japan

Japan is continuing a broad program of ocean salmon research in three major areas: 1) life history, distribution, growth, and feeding ecology; 2) population

dynamics, mortality, carrying capacity, and ocean environment; and 3) stock assessment, biological monitoring, and stock identification.

Japanese scientists are conducting salmon research during six cruises in the North Pacific Ocean and Bering Sea in 1998. Two vessels, the *Wakatake maru* and *Oshoro maru*, are being used for Japan-US cooperative research. The samples and data collected are used in ongoing investigations—for example, to identify physical and biological factors affecting salmonid distributions, growth, and feeding. Japanese scientists are using the data from summer surveys to establish methods to assess salmonid abundance and biological characteristics by species and stock, and to estimate abundance and survival of juvenile salmonids before wintering.



Dick Carlson

W. E. Ricker



F/V Great Pacific

Russia

Russian research cruise plans in 1998 are part of the far-eastern regional program on the marine life of Pacific salmon, 1997-2000. Three Russian salmon research cruises are scheduled—in the Bering Sea, the Okhotsk Sea, and the northwestern Pacific. Scientists aboard the R/V *Professor Levandov* are conducting complex ecosystem research in the southwestern Bering Sea and Pacific waters off eastern Kamchatka from July to September. Scientists aboard a middle-tonnage trawler fishing with gillnets are conducting research on stock assessment, migrations, biology, and identification of local salmon stocks in waters around Kamchatka from May to October. Another middle-tonnage trawler fishing with a pelagic trawl will be used to sample juvenile salmon in the southwestern Bering Sea in the fall.

United States

US high-seas salmon research in 1998 involves an integrated program of field and laboratory studies, and computer modeling conducted in cooperation with Canada, Japan, and Russia. Scientists from the US National Marine Fisheries Service, Alaska Fisheries Science Center, Auke Bay Laboratory are conducting three offshore cruises, as a part of their 1998 Ocean Carrying Capacity research program: 1) Spring, eastern North Pacific Ocean, R/V *Miller Freeman*; 2) Spring, eastern North Pacific Ocean, F/V *Great Pacific*; and 3) Summer, Gulf of Alaska and the North Pacific Ocean, F/V *Great Pacific*. The research includes: 1) broad-scale field studies of the distribution and migration of salmonids; 2) fine-scale field studies that focus on aggregations of salmonids to look for specific processes or factors that influence their distribution, behavior, and growth; and studies on: 3) diet and bioenergetics; 4) genetic stock-identification; 5) monitoring of thermally marked salmon; and 6) growth and size of salmon. ■

TEMPERATURE TAGGING

From May to July in the Bering Sea and North Pacific Ocean, US and Japanese researchers aboard the vessels *Great Pacific*, *Oshoro maru*, and *Wakatake maru* tagged and released 55 salmon and steelhead with special tags that measure and store data on water temperature. If any tagged fish are recovered and returned, scientists will use the data to learn more about the behavior of salmon with respect to sea temperatures. The cooperative study is being conducted by scientists at the US National Marine Fisheries Service, Fisheries Agency of Japan, Hokkaido University, and University of Washington.

1998
1999

RETURN HIGH SEAS SALMON AND STEELHEAD TAGS

measure length



scrape off scales from these areas on both sides of the fish and place the scales into a folded piece of paper



Examples of high seas disk tags



Tag color is red/white or solid red

- Collect disk tag, if tag cannot be collected then get tag number and description
- Collect temperature tag, if present
- Collect scales and carefully measure fish length as shown
- Record location, date, species, gear, sex, and weight

RETURN a high seas salmon tag (or tag number and description)

GET a custom embroidered cap as a reward



Send to: **High Seas Project**
University of Washington
Fisheries Research Institute
Box 357980
Seattle, WA 98195-7980

Some fish carry a temperature tag



\$50 REWARD for return of an undamaged temperature tag

For details call: (206) 543-1101

INTERNATIONAL HIGH SEAS SALMON TAGGING

Life Aboard A High-Seas F

This article is the second in a series of newsletter reports on NPAFC-related research that features a view of life aboard a high-seas salmon research vessel (see "The Excitement of High Seas Salmon Research," Vol. 1(2), Autumn 1997).

At 4 am, February 15, the bulk of the 93-meter stern trawler, *Kaiyo maru*, the flagship of the Fisheries Agency of Japan, drifts lazily in the northern area of the central Bering Sea. Interest in determining the wintertime distribution and temperature habitats of high-seas salmon (*Oncorhynchus* spp.) has brought the *Kaiyo maru* to this distant location. After leaving Tokyo, the ship fished along the 165°E meridian moving northward. South of 46°N latitude, young sockeye (*O. nerka*), chum (*O. keta*), pink (*O. gorbuscha*), and chinook (*O. tshawytscha*) salmon, spending their first winter at sea, had been abundant in the catches (N=1954). As the *Kaiyo Maru* continued operations, first to the north, and then to the northeast around the western end of the Aleutian Islands, the salmon catch dwindled to a sprinkling of young sockeye, chum, pink, and chinook, and a few older sockeye and chum salmon that were spending their second winter at sea (N=12). Only the day before, the *Kaiyo maru* had arrived in the international waters of the central Bering Sea basin known as the donut hole.

The *Kaiyo maru* is a large vessel, easily accommodating a crew of 47 with 10 additional scientists, including specialists of salmon biology, ecology, and distribution, and, physical and biological oceanographers. Five scientists are from the Far Seas Laboratory in Shimizu, Japan, three students come from Hokkaido and Shimizu, and another two scientists come from Russia and the USA. This is the first opportunity for these

scientists to fish for salmon in the Bering Sea in winter. For the moment, the researchers are sleeping, but outside the icy waters are 1.2°C, and the air temperature is hovering at -8°C. In an hour, they will don their protective clothing, drink some coffee, and head out on deck to start the morning's work.

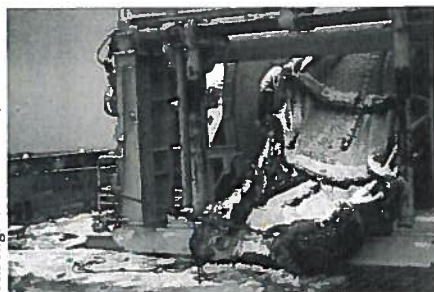
On the trawl deck, the crew shovels and washes off the inch-thick slush ice that has formed. A few make heavy wet snowballs from the snow that has gathered on the trawl net. On the starboard side, a winch hoists the 2-m tall CTD sensor and rosette of Niskin bottles up and into the water. Over the next hour and 10 minutes, depth, temperature, and salinity sensors continuously transmit data to the ship's computer as the CTD descends from the surface to 1500m—providing the data oceanographers require to describe the ocean environment in which salmon live, and probing the intermediate depths that contribute to the dynamics of ocean circulation. As the CTD rosette is slowly brought back from the depths, the Niskin bottles are tripped electronically to capture water from 23 depths.

Meanwhile, on the side of the trawl deck the 2-m long Norpac zooplankton net is recovered from 150 m depth and the zooplankton clinging to the mesh are rinsed into a collecting bottle. This net recovers some, but not all, of the planktonic animals fed upon by salmon. The morning's collection contains small jellyfish, arrow worms, and copepods, but it is not rich in food for salmon. A preservative is added so that later, the sample can be sorted, identified, and weighed into its plankton components.

The winch is then used to deploy the 30-l Go-Flo water sampler. Water samples are collected from several depths to determine the levels of photosynthetic pig-



FRI High-Seas Archives, UW



FRI High-Seas Archives, UW

Top: Researcher aboard the *Kaiyo maru*
Bottom: A snowy day at sea on the *Kaiyo maru*

Research Vessel



Fisheries Agency of Japan

ments contained in the phytoplankton, which is an indicator of the capacity for photosynthesis in the water column. Additional surface water samples are collected for determination of the rate of primary production.

By now, the small group on deck can smell the comforting indications that breakfast is nearly ready. The crew dashes out of the cold to eat a hot meal of miso soup, rice, and grilled mackerel.

Contemplating the results of the previous evening's XBT (expendable bathythermograph), which measures temperature and depth, the salmon scientists decide to make two trawl operations, one to immediately follow the other based on the thermal structure of the water column. The XBT profile shows that the water temperature from the surface to 150 m differs by only 9 hundredths of a degree, from 1.66° to 1.75°C, indicating a deeply mixed surface layer. Deeper, between 150 and 170 m, the water temperature warms from 1.75°C to 3.90°C. This location of quickly changing temperature is the thermocline depth. The salmon scientists wonder if the surface mixed layer is too cold for salmon and whether the salmon could be holding just below the thermocline to take advantage of the warmer water. The decision is made to set the first trawl in the surface layer (0-50 m depth) and a second trawl operation at the thermocline depth (175-210 m). Their expectations for the catch of salmon run the gamut: bag full to bag empty.

The *Kaiyo maru* is slowly making headway, and first the codend, then gradually the whole trawl net slips off the end of the stern ramp. The midwater trawl is hugh: the mesh bag alone is 222 m long. The cables and bridles are slowly unwound off the large winch until more than 100 m of cable is let out and the

trawl disappears behind the boat. The trawl doors, each weighing 1450 kg, swing and bounce as the crew deftly attaches them between the trawl and the main warp cables from which the trawl is towed. The doors spread the mouth of the trawl into an oval 50 m tall and 70 m wide. The warp cable is quickly run out to 400 m and the trawl slowly comes back up to the surface where its own bow wave is visible from the bridge. The ship is now trawling westward at 5.8 kts, and any salmon swimming in front of the net's mouth are likely to tire eventually, and drift back into the lined codend from where there is no escape, even for much smaller myctophids, or juvenile fishes.

After an hour, the warp cable is hauled back and the process is repeated in reverse. Eventually the codend is back on deck, unraveled, and the codend liner thrown open. The catch is five young chinook salmon. The salmon and by-catch of squid (Gonatidae) and jellyfish are removed from the netting and put into trays and taken below for processing. The crew busily prepares to set the trawl immediately back in the water.

Processing the salmon catch includes collection of scales for determination of the fish's age. Scales from the preferred area on the midbody are not to be found due to the abrasive action of the trawl, so scales are removed from protected areas under the fins, usually the pectorals. The fork length is measured to the nearest mm and the fish is weighed to nearest gram. Judging from their size, these young chinook salmon were likely spending their first winter at sea. A blood sample is removed to determine the serum levels of a growth hormone, insulin-like growth factor 1, which changes seasonally and precedes rapid growth in salmon. The salmon are individually la-

beled and frozen for later detailed examination at Shimizu, where individual organs will be weighed, stomach contents will be identified, and tissue samples for condition factor and stock identification will be collected.

Lunchtime arrives and the ship's complement is grateful to be served a hot noodle soup, which is eaten quickly because soon it will be time to retrieve the second tow. The scientists are wordlessly wondering, will there be more salmon in this deep tow? Will there be any? Gradually the net is brought back on board and the codend is opened. Three more young chinook salmon reveal themselves in the mesh among the squid (*Gonatidae* sp. and *Gonatus middendorffi*) and the lumpfish (*Aptocyclus ventricosus*). The process begins again, the catch is brought below, the salmon are measured, weighed, a scale, and blood sample removed. Obviously, chinook salmon are adapted to the extreme cold water of the central Bering Sea. But are there other species of salmon overwintering in the surface waters of the Bering Sea? Maybe the next trawl will reveal these secrets. The scientists retreat to their rooms to read, write, analyze, sleep, or perhaps play the guitar. Meanwhile, the *Kaiyo maru* steams south 90 nm to the next station and prepares to set her net.

—Nancy Davis, Fisheries Research Institute, University of Washington

—Yukimasa Ishida and Yasuhiro Ueno
National Research Institute of Far Seas Fisheries

—Maxim Koval, Pacific Research Institute of Fisheries & Oceanography Kamchatka Branch (KamchatNIRO)

Climate Change Workshop Update

Over 70 scientists, industry representatives, and fisheries officials attended the NPAFC Workshop on Climate Change and Salmon Production on 26–27 March 1998 in Vancouver, BC. A technical report of the workshop, which includes extended abstracts from 20 scientific presentations, is available from the NPAFC Secretariat.

Some highlights

- Doug Eggers (Alaska Department of Fish & Game) presented historical run reconstruction data for Bristol Bay and Chignik sockeye salmon. He indicated that periods of depletion are inconsistent among stocks and suggested that “the interaction of fishing and climate-induced variation in productivity determines abundance of salmon.”
- Leonid Klyashtorin (Russian Federal Institute of Fisheries & Oceanography) has been developing a long-term forecast for salmon production in the North Pacific based on atmospheric circulation and earth rotation velocity indices. He suggests that North Pacific salmon production is declining and will bottom out around 2020.
- Oceanographer Jim Schumacher (Two Crow Environmental Consultants) examined the huge plankton bloom that covered most of the eastern shelf of the Bering Sea in September 1997, suggesting the associated turbid water may have affected predator–prey interactions. Anecdotal reports of higher marine mammal abundance and seabird mortalities seem to validate this.



Discussion at NPAFC Workshop

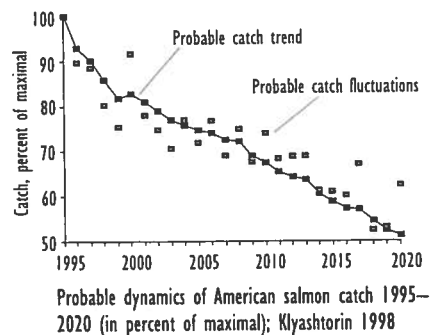
El Niño

The 1997–98 El Niño event developed with astonishing swiftness and became the second strongest climate anomaly of the 20th century. Eventually, an unbroken ribbon of warm water extended along the eastern rim of the Pacific Ocean from the equator, along the coasts of the Americas, and along the coast of the Aleutian Islands as far as the international date line. Associated with it were observed record high temperatures and sea-level anomalies. High sea-surface temperatures bring high northward diversions of adult sockeye salmon along their coastal migratory routes off British Columbia, and in 1997 the northward diversion was the highest ever recorded. The 1997–98 El Niño event is now over, but excess heat in coastal waters is expected to have some impact on 1998 fisheries. The computer models that produce the forecasts of climate change events had a particularly poor record in 1997. There is no reason to expect a better performance in 1998, but most computer models are indicating that in late 1998 the tropical Pacific will make a transition to a Pacific cold event, known as a La Niña.

—Howard Freeland
Institute of Ocean Sciences, Sidney, BC

Salmon Catch Trends

A comparison of recent commercial salmon catches in Alaska indicates that Klyashtorin’s probable catch trends may be far too conservative. The maximum (record high) commercial harvest of Alaska salmon was 218 million fish in 1995, which was a 12% increase over the previous record catch of 195 million fish in 1994. The Alaska commercial harvest one year later in 1996 declined by 19%.



And last year, 1997, the harvest was only 121 million salmon, a significant 31% decline over the previous year and a huge 45% decline from the maximal catch of 218 million only two years before.

At press time, all indications of the 1998 catch point to even further declines. This trend suggests that we will reach or exceed the low point on Klyashtorin’s declining trend line well before his 2020 year projection, possibly even before the turn of the century. These dramatic declines in abundance of Alaska salmon add support to the idea of reduced marine survivals based on interdecadal climate fluctuations in the North Pacific Ocean.

Japanese and Alaskan catches show a synchronous response to current abundance fluctuations, with Japan lagging one year lag behind the Alaskan pattern. The maximal catch in Japan was 89 million salmon in 1996, one year later than in Alaska. This maximal Japanese catch also represented an important increase (16%) over a previous record high catch of 77 million fish the year before (1995). Then in Japan, as in Alaska, there was a significant decline the year following maximal catch (a 15% decline to 76 million fish in 1997).

—William R. Heard, NMFS, AFSC,
Auke Bay Laboratory

STR *Katunino*

Russian researchers aboard the STR *Katunino* surveyed juvenile salmon in the eastern Sea of Okhotsk (51-58°N latitude, 148-156°E longitude) in September and October 1997. A rope-trawl was used for spot fishing. The trawl, towed for one hour at 5 knots, sampled from the surface to 35 m deep. The catch was primarily pink (73%), chum (21%), and sockeye (3%) salmon, and the remainder was coho, chinook and masu salmon. Juvenile pink salmon were distributed over the entire survey area. Maximum concentrations occurred in a narrow (60-80 mile) strip along the first northwest branch of Pacific current entering the Sea of Okhotsk through the Kuril Straits. Pink and chum salmon infected with *Cryptocotyle* sp. were caught. Stock identification analysis indicated that the pink salmon originated from the Shelikhov Bay rivers and northern part of the Sea of Okhotsk (7%), Sakhalin (6%), and west Kamchatka (87%). Similar to previous years, the center of pink and chum salmon aggregations was separate. Dense aggregations of juvenile chum salmon were observed along the southern and northeastern edges of juvenile pink salmon aggregations. Besides juvenile salmon, catches included juvenile Atka mackerel *Pleurogrammus monopterygius*, juvenile herring *Clupea pallasii*, juvenile walleye pollock *Theragra chalcogramma*, juvenile and adult northern smoothtongue *Leuroglossus shmidti*, and occasionally capelin *Mallotus villosus socialis*, lumpstickers *Eumicrotremus* sp., butterfly sculpin *Melleles papilio*, and juvenile Bering wolffish *Anarhichas orientalis*.

—V.G. Yerokhin, KamchatNIRO
(adapted from a translation by
A. A. Shurigina, KamchatNIRO)



On the Pacific Ocean near the Kuril Islands



FRI High-Seas Archives, UW

RPY *Ecopacific*

Investigations aboard the RPY *Ecopacific* (May–October 1997) covered an extensive area along the east coast of Kamchatka (51-64°N latitude). Scientists collected information on catch composition, feeding, water temperature, salinity, and zooplankton composition. Biological data were collected from 2650 salmon: 1159 chum, 1030 sockeye, 76 chinook, and 215 coho salmon, and 170 Arctic char. Salmon were also sampled for stomachs (230 fish), otoliths (200 fish), and scales (2600 fish). Analysis of stomach contents showed that chum salmon consumed Pteropoda, Myctophidae and Appendicularia, and also fed on Euphausiacea and juvenile codfish in the Anadyr and Karaginski areas. The predominant prey of sockeye salmon (in decreasing order of importance) were Euphausiacea, Copepoda, Myctophidae, and Hyperiididae, and also some Pteropoda and Appendicularia. Chinook and coho salmon fed on sand lance, young squid, young Cottidae, euphausiid spawners, and also on greenling juveniles within Petropavlovsk-Kommandor sub-zone. Stomach fullness increased from May until mid-July, and then decreased until late September.

—M. V. Koval, KamchatkaNIRO
(adapted from a translation by
A. A. Shurigina, KamchatNIRO)

KamchatNIRO

Director: Sergey Sinyakov
Website: www.marine.su/TINRO/kamniro/1e.htm

The Kamchatka Branch of the Pacific Research Institute of Fisheries & Oceanography (KamchatNIRO), located in Petropavlovsk, Kamchatka, has 14 laboratories:

- Dynamics of Abundance & Salmon Forecast Improvement
- Genetics Research
- Fertilization and Monitoring
- Salmon Reproduction
- Sea Salmon Research
- Ichthyo-Virology and Fish Diseases Prophylaxis
- Pelagic Fish Research
- Bottom Fish Research
- Invertebrates and Seaweed
- Oceanography Research
- Mathematical Support Forecast
- Sea Mammals Research
- Fishing Gear Research
- Biotechnology Research

HOKKAIDO HATCHERY PUBLICATIONS

The 50th anniversary issue of *Scientific Reports of the Hokkaido Salmon Hatchery* (HSH) was published in the fall of 1996. During half a century, 377 articles, including nine PhD dissertations, have appeared in the journal. These include many excellent articles on early life history, habitat environments, physiology, and diseases of salmon. Information from these articles was applied to the enhancement of Pacific salmon, resulting in an increase in the chum salmon population in Japan. Unfortunately, many articles may be unknown because of poor distribution and lack of information in English. Thus, all articles have been compiled in a new bibliography prepared by scientists of the HSH and edited by Dr. Shigehiko Urawa. The bibliography consists of contents; abstracts; and author, subject, geographical, and taxonomic indices. Japanese and English versions are available.

In October 1997, HSH was reorganized and renamed the "National Salmon Resources Center." With the new phase of our institute, we hope that the bibliography will be used for the advancement of salmonid sciences and stock management.

—Tateo Shima, Director, Osamu Hiroi,
Research Divisional Director
National Salmon Resources Center
2-2 Nakanoshima Toyohira-Ku,
Sapporo 062-0422 JAPAN



The coziness and beauty of the new office showing the taste of the unique Secretariat staff.

New Boardroom

INTERNATIONAL GIS NEWS

Geographic Information Systems (GIS) have become powerful tools in fishery sciences. The first international GIS Symposium in fishery sciences will be held March 2-4, 1999 in Seattle, Washington, USA. The main organizer is the Fishery GIS Research Group Environmental Simulation Laboratory in Saitama, Japan. The Alaska Fisheries Science Center, National Marine Fisheries Service, Seattle, Washington, USA has volunteered to assist in organizing the symposium.

The primary objectives of the symposium are to: a) highlight developments and applications of GIS in fishery sciences; b) exchange ideas and information; and c) further improvement for techniques and applications of GIS in fishery sciences.

Papers will be published in a Proceedings of the Symposium. For further information, contact: Tom Nishida, National Research Institute of Far Seas Fisheries, 5-7-1 Orido, Shimizu, Shizuoka, Japan 424-8633
E-mail: tnishida@enyo.affrc.go.jp
FAX: 81(Japan)-543-35-9642
Tel: 81(Japan)-543-36-6043

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

SECRETARIAT MIGRATES DOWNTOWN

In May, 1998, after 39 years on the University of British Columbia Campus, the location of the Secretariat has moved. And quite a change it is. We have gone from a beautiful spacious greenbelt visited by squirrels and bald eagles, and where we could view the changes of seasons in unusual trees right outside the window; to the downtown core of Vancouver, full of noise, the hustle and bustle of traffic, and trees made of concrete. But, alas, we four country girls are enjoying the big city!! There are many amenities—such as banks and restaurants at our doorstep, and so many different faces and fashion to view. There's never a dull moment.

The new office was renovated for our needs courtesy of the host country. Now, we have a small library and a boardroom which can accommodate 12 people. Visitors are welcome any time to our bright and cozy office on the corner of West Pender and Hornby (Suite 502, 889 West Pender), 3 blocks from the Department of Fisheries and Oceans, 30 minutes from the Vancouver Airport.

—Hiroko Omori
Deputy Director



Secretariat staff in the new library

NPAFC Archives