SOUNDER

Newsletter of the Department of Fisheries and Oceans, Pacific Region

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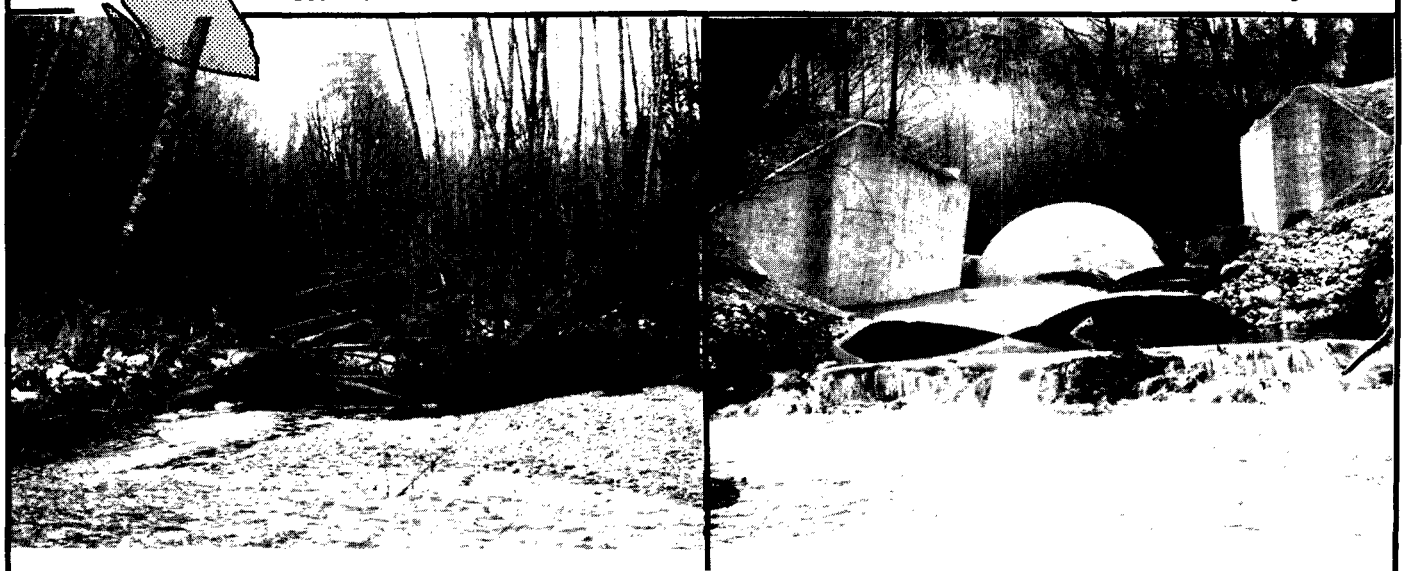

A lot of work has to be done to clean up the Salmon River in the Lower Fraser Valley. The bridge on 56th Avenue, (right) was washed away during severe Christmas floods.

Floods took a heavy toll

Bridges collapsed under the force of surging waters, or were carried away whole, dykes spilled over and houses were inundated, both major highways going east out of B.C. were blocked by mudslides and the rain kept coming down. This was Christmas 1980.

But the greatest toll of December's floods, in terms of loss of life, was a silent one--50 to 90 percent of the 1980 spawn of wild salmon in many B.C. rivers. Hardest-hit regions of the province were Vancouver Island, the central coast and southwestern British Columbia. The Queen Charlotte Islands, north coast and upper Fraser River watershed escaped severe flooding and few fish losses are expected.

Although major SEP facilities were not damaged seriously and incurred no egg losses during the 1980 floods, estimates of losses to wild fish stocks vary from 50 to 90 percent of the egg deposition. Chinook, for example, that spawn a five-year-old fish in Campbell River, were hard hit by flooding in 1975 which reduced the 1980 escapement to 1,000 adults from 3,000 fish in 1975. Again, in 1980, floods dealt this valuable stock a serious blow so that escapement in 1985 may be down to only 300 fish.

In the fall of 1980, returns of chum salmon to rivers and streams on Vancouver Island were greater than anticipated by the Department. Flooding that occurred after spawning was completed, however, will reduce significantly chum returns in 1983 and 1984. Losses are expected to be 50 percent or more of each major stock. The Sarita River, a prime producer of chum salmon in Barkley Sound, was still coffee-coloured with a high silt load two weeks after the highest floodwaters had subsided. On the mainland, chum losses may be up to 90 percent in the Harrison-Chehalis system, the Chilliwack-

continued on page 3

Editorial *Loose lips give tips*

The truth is sometimes so pervasive, so unrelenting, that it follows you everywhere, even to Sam's Deli.

I had just emerged from a hive of activity at the pre-Christmas Field Service's general meeting in Victoria The previous afternoon and all that morning there were presentations, panels, speeches, informal discussions, criticisms, criticisms and more criticisms--enough ideas for a volume of *Sounders*. But enough of this, I thought. I'd escape for a quick lunch at Sam's, on Douglas across from the Empress Hotel.

Sam's is one of those rare oases of plenty. A good place to meet your MLA, too. Lots of tomatoes. I edged up to the counter and haled for a roast beef, cream cheese, alfalfa sprout, tomato with mayonnaise and salt and pepper on whole wheat sandwich, and a bran muffin so large it seemed to have outgrown its cup, with a small apple cider on the side. Of course, I forgot that this was enough to satisfy a Sumo wrestler after a three-month fast.

Next to the window, across from a red-haired, freckle-faced man with big glasses, was the only seat in the place. He didn't mind if I sat down, he said, and introduced himself as Nigel Banks, a lawyer with Westwater Research. Westwater is the UBC research centre that for over ten years now has been stirring up muck in the area of resource management. One of the group's directors, Dr. Andrew Thompson, headed the West Coast Oil Ports Inquiry.

Nigel Banks was in the capital to do research on constitutional matters. He said he knew several members of Field Services staff, so I told him about the meeting and all the talk of a communications problem with the public. He let loose.

"Problems with the public?" he chimed. "They don't even know what's going on in the next office."

Wow, I thought, what a nasty thing to say. But is it true? Here's a quote taken from my notes of the general meeting:

"There are poor existing communications within the organization and we must solve these internally before we go outside."

That, essentially, is what *Sounder* is here for--to improve internal communications. Communications problems do not develop as the result of some negative force. Everyone might be doing their jobs perfectly well. The gaps develop when the organization changes in one way or another, through growth or evolution. In an age of accelerated change, such as ours, the problems can come back to haunt before anyone even realizes the problems exist. In other words, there are probably many areas in the Department where better communications could help, but few have taken the time to make them work.

Take a few minutes to drop us a line.

Mike Youds,
Editor

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Newsletter of the Department of Fisheries and Oceans, Pacific Region.

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Government of Canada Fisheries and Oceans

Floods...

Vedder watershed, and the Squamish River and associated tributaries.

In addition to heavy losses of Island stocks of chinook salmon, the 1980 escapement of 10,000 to 12,000 fish into the Squamish watershed is likely to decline to only 1,000 adults returning in 1985.

At the north end of Vancouver Island, pink salmon in the odd-year cycle were hard hit by flooding in 1975. Five years later, the even-year cyle of pinks is decimated with only 25 percent of the 1980 escapment expected in 1982.

Wild coho stocks have generally been reduced although some adults spawn in southern British Columbia rivers in December and January. Spawning by these adults after flood waters have subsided will help restore at least some coho losses. Similarly, steelhead in southern regions of the province were not seriously affected by the December floods. Adult trout were present in the swollen rivers in December, but do not spawn until early spring.

Although effects of the 1980 floods on wild fish stocks are certain to be felt in the commercial, sport, and native food fisheries years from now, fish production from SEP facilities and projects was not affected by flooding, and will help offset this loss of natural stocks.

Terry VanderSar
Writer for the Salmonid Newsletter

Letters

Put the dam back

Dear Editor,

Just a short note to let you know that I certainly appreciate receiving a copy of the *Sounder*. I read it from cover-to-cover. The *Sounder* is the only source for obtaining news of present and past Fisheries staff. Keep the *Sounder* !!

It is with dismay that I read in the *Sounder* of November 1980 (volume VIII, number 7) in "Kemano's Second Coming" that on the map the Skins Lake Dam has slipped downstream to Fort Fraser. It is hoped that you will put the dam back where it belongs before Alcan misses it.

John Tuyttens
(former fishery officer i/c
Prince George sub-district)

Editors note: Our cartographer wishes to apologise for this grievous error... but wants to make a deal with Alcan.

The height of hindsight

Dear Editor,

First of all I would like to congratulate you for your excellent choice of pictures. I refer of course to page 3 of volume VIII number 8 issue of the *Sounder*.

This brings me to the main point of my writing you. I refer to the letter from the "Hindsight Award Committee", who ever they may be as no signatures accompanied the letter. I only hope that this year's recipients of the distinguished award consider with all sincerity some type of award for this committee because in my mind the context is truly the height of hindsight. As you are by now aware, the award never left the sight of myself or Dennis.

Another point while I'm at it. I would like to ask the "Hindsight Committee," if they were so concerned about the whereabouts of the award why did they not ask us?

Jack Broome
Assistant District Supervisor
Nanaimo, B.C.

Dialogue

An interview with Assistant Deputy Minister Doug Johnston

In an unprecedented move last September, Assistant Deputy Minister Doug Johnston was posted from Ottawa to Vancouver to provide better coordination of Department programs in the west. Doug began working for the Department in 1966 after spending eight years as an engineer in the pulp and paper industry. His first position involved managing the marine plants experimental station on the East Coast. In 1968 he became Chief of Industrial Development for the Maritimes Regions. When the federal Environmental Protection Service was first established in 1970, Doug joined in that effort. He was later appointed Regional Director of Fisheries in the Maritimes Region in 1973 and in 1979 he became Assistant Deputy Minister.

Doug Johnston

Could you outline the reasons for your transferal to the West Coast?

I've been posted here because the government decided they would like to assess having an Assistant Deputy Minister's office in the Pacific Region. The rationale for this includes; the vast distance between Ottawa and Vancouver, the fact we have two very important and highly visible programs, namely Fisheries management and SEP, requiring co-ordination at the regional level and it was felt there should be higher level of decision-making in the region.

I imagine you spend a lot of time flying back and forth.

That's right. I still have my other responsibilities for the Western region and the Ontario region. About 85 percent of my total budget is involved with the Pacific Region, so it's only natural that I spend more time here.

It is a permanent move?

I've been posted here on a trial basis for a year to set up the office. At the end of this period an evaluation will be made as to the effectiveness of having an ADM's office in Vancouver.

Could you give an informal assessment of the posting?

At this time that would premature, other than the fact that there's an unquestionable benefit to be gained from having all Fisheries Programs working together. For example, SEP is in the salmon enhancement business and Fisheries Management is in the business of managing the wild stocks. The programs in each of those sectors should flow from an overall salmon management plan -- it's fundamental. I can't imagine not having someone at the regional level to carry out this function.

You have an announcement to make, I understand.

Yes, we have developed a Human Resources Management Program. This is a Pacific and Freshwater initiative. We feel that the best resource we have is our staff and we are going to pay more attention to career development for our employees.

Fred Iviney, personnel manager for

the Pacific Region has been seconded for two years to head up this program. He has already been involved now for a number of months developing a proposal. We have reviewed the proposal that he has put forward and have approved it. It will provide all employees who have a penchant or leaning towards management with an opportunity to participate in a training program. It's divided into four levels of training, the first very basic, and then graduating in complexity to level four. There are other aspects of this program which are explained in another part of this edition of the SOUNDER.

Is there an East-West communications problem in the Department?

I think that sometimes "communication problems" are used as an excuse. People, whether in the east or west are only as far away as the phone. However, having said that, I know there is room for improvement in the area of east/west communications.

We hope to increase the number of those people having experience in the west coast fisheries in Ottawa. We now have Ron MacLeod, Cary McAllister, Harold Underdahl, Jay Barclay and Obert Sweitzer doing yeoman service in Ottawa. It's important for those working in Ottawa to have had experience in the regions and vice versa. We're prepared to have staff at all levels from time to time go to Ottawa on secondment for six months or perhaps a year. This provides for two things: people in Ottawa with experience and the individual an opportunity to work with the government in a central agency milieu. Communication is an item that we can always work on.

Someone recently said that the Department tends to manage by "crisis".

That's right. The nature of the fishing industry lends itself at times to crisis management. I feel that this can be minimized by doing some serious and constructive planning. We are now putting more emphasis toward attaining this goal. Al Wood for example has been appointed Director of Planning for all of our programs in the Pacific Region. Recognizing we will always have a certain number of crisis situations, we will improved planning be better able to cope with them.

What are the major challenges facing the Department, and West Coast fisheries in general, in the 1980's?

We have two main issues. We haven't enough fish and we have too many vessels. To deal with the first problem the department has to encourage both the rehabilitation of natural stocks and press forward with enhancement. In terms of management strategies we must address ourselves for example, towards the problems associated with mixed stock fisheries, the minimization of catching juvenile fish and the assurance of optimum escapement to the spawning grounds while continuing to have an effective enforcement program.

Another program that has to be front and centre is Habitat Management. Because of the impingement of man's activities on fish habitat, with the resulting major loss in fish production, we must strive to halt this degradation and hopefully regain some lost ground. Habitat Management is one of the more critical programs that we'll be dealing with in the 1980's.

In the field of enhancement we will finish the last few years of Phase One of SEP. It appears to be a successful program in spite of some financial constraints. It is projected that a production level of 42 million pounds of salmonids will be achieved in Phase One. If funds can be found to supplement the program this figure could reach as high as 50 million, the original production target set for Phase One. A major challenge in the 80's for Enhancement is the planning and implementation of Phase Two of the program.

Included in our major thrusts for this decade is the acquisition of new knowledge. To this end a greater emphasis will be placed on fisheries research. Part of that is the identification of stocks and knowing more about their migratory routes. This leads us to another big issue -- the

dialogue...

Canada-U.S. interception agreement--and if we can get an agreement in the 1980's, that will provide us with a fantastic challenge and open the door for a much more effective management regime, in its broadest sense.

The too many vessels problem and the whole issue of "Allocation of Access" to the resource will be addressed by the Commission of Inquiry into the West Coast fishery headed up by Professor Peter Pearse.

In summary the Pacific Region is on the threshold of one of the most challenging and exciting periods in the history of the West Coast fishery. With a concerted effort between governments and all user groups the foundation for an optimum fishery can be made and built on during the 80's.

Fisheries involvement

Studies look closely at Fraser estuary

For eight years, beginning with studies on the expansion of Vancouver International Airport, Resource Services Branch scientists from the Habitat Protection Research Unit have had an active role in Fraser River estuary research.

A major project currently underway involves a comparitive study of the fish communities, invertabrates, production and detritus at low tide refuges in the sand flats and eelgrass on Sturgeon and Roberts Bank respectively. People involved in this project are myself, Galen Greer and Mel Kodyk from West Vancouver Laboratory and John Sibert and Tom Brown from the Pacific Biological Station.

Juvenile chinook were found to be one of the major fish species using the refuges. On Roberts Bank the eelgrass habitats were characterized by an incredible diversity of species including salmon, herring, greenling, shiners, gunnels, crabs, and 8 species of sculpins.

The research barge "L. Pacifica," moored at Steveston, is being used as a base for the research. Access to the pits, as the refuges are called, is always interesting. The scientists usually head out over the Banks at high tide and wait for low tide. As the study areas are completely exposed to the Strait of Georgia, this can be an interesting ride in a small inflatable raft when a stiff westerly breeze is blowing. Occasionally, they can hitch a ride on the Coast Guard hovercraft, which is most appreciated in winter when low tides occur at night.

Other activities pertinent to the Fraser estuary are actually occurring in the laboratory as we are busy writing up results of past research on a variety of topics. A final report, partially supported by SEP, on marsh transplants, is almost complete. Another particularly interesting study, conducted in 1978, showed that fish larvae and zooplankton are carried by the "salt wedge" under the river, to considerable distances up the estuary. This work was started in response to the potential impact of river training walls in the lower Fraser. Off Steveston, at high tide, a zooplankton catch near the bottom of the river resembles one from the middle of the Strait of Georgia, dominated by animals typical of full marine conditions. A haul from the surface, a few metres up, shows the characteristics of river communities.

Other research, by Hal Rogers and Harold Mahood, also at the West Vancouver Laboratory, examines the complex of organic pollutants dumped in the estuary. Some components have been shown to end up in fish and crabs. Ian Birtwell is planning further studies on the impact of sewage on estuarine salmonids at the Fraser.

Colin Levings,
Research Scientist

Fisheries Statistical Committee

All stats fit to print

They've shortened the name--from Fisheries Statistical Users Committee to Fisheries Statistics Committee--but they still have a dizzying task ahead of them. Within the next few years they want to have in place a computer system programmed with all the Department's statistics and available at a moment's notice to all staff who need it. A dream, maybe?

"There is mounting disenchantment with the present system and the inaccessibility of data." "says Sharon Henderson, SEP systems coordinator. "Hardware is becoming less expensive, putting computer power at the fingertips of almost anyone who wants it."

Currently there is little escapement data on computer and catch data on computer is not easily accessible to the users.

The Committee, consisting of eight members representing Resource Services, Economics and Statistics Branch, Field Services and SEP management, was originally set up in October as the Catch Statistics Users Committee, to find better means of computerizing the mass of catch statistics that floods the Department every year. But after hiring DPA Consultants to investigate the situation, the Committee realized there is a pressing need for an all-encompassing data bank.

Hilda Vanstone, Records supervisor, with present statistical record system.

"We have to consider practically everything on the horizon," Sharon says.

The Committee is planning to have a comprehensive plan made up by the end of March, 1981 for what needs to be done over the next six to ten years. Ideally, the end product will be a system that both office and field staff can use with only a minimal amount of training. To help develop this system, the committee members are looking for input from other Department staff.

"If people are aware of what we're really looking at," Sharon says, "I would be surprised if we didn't get back all kinds of comments."

SEP christens the EPIC

SEP planners have created an EPIC by removing the PAIN from their systems.

For three (painful?) months PAIN was the acronym ascribed to SEP's new computer database--the Planning Analysis and Information Network.

"It's purely a psychological thing," Sharon Henderson says. "Multiple Access and Quasar (system consultants) said 'look, you *can't* call it that'."

So PAIN became EPIC--Enhancement Planning Information Control. SEP biologists and planners at Department headquarters already have access to EPIC through terminals. The name change, Sharon says, may encourage its use.

"Fortunately, the system is simple to use," says Cindy Brown, SEP evaluation economist. "You can sign on yourself if you've got the password. It's already proving to be really valuable."

The system is set up on a project by project basis and contains project, financial and production data.

Whaling: politics vs. conservation

Following the publication in November Sounder of "Canada's whaling decision", Dan Goodman, International Directorate for the International Fisheries Relations Branch, sent to us a more detailed explanation of the controversial policy.

For many years, Canada has pursued a consistent conservationist policy in the management of its renewable marine resources.

Simply stated, it is a policy of stock-by-stock management which allows harvesting where population levels permit, and strict limitations on harvesting, including moratoria where appropriate, when rebuilding of a particular fish or marine mammal population is required. This is why Canada's commercial whaling industry was closed by government order in 1972 as a conservation measure due to the dwindling stocks of whales off the Canadian coasts.

The same conservationist approach is taken by Canada when taking part in meetings and decisions of the International Whaling Commission (IWC), the international organization set up in 1946 to ensure proper conservation of whale stocks throughout the world.

The Convention under which the IWC operates is based on the fundamental premise that, *subject to conservation requirements, whales are resources available for harvest*. The Convention also specifies that any regulations adopted by the Commission must be based on scientific findings.

Canada's Position

At the last annual meeting of the IWC in July 1980, the Canadian representative to the Commission voted against proposals for a moratorium on all commercial whaling and proposals for a moratorium on the taking of sperm whales. Why? Since the IWC's own scientific committee did not recommend that there was any sound scientific basis for such moratoria, such action was unnecessary as conservation requirements could be adequately met under the existing procedures which provide for selective moratoria (zero quotas) based on scientific analyses of stock status.

At the same IWC meeting Canada, consistent with its policy, voted against allowing the harvesting of whale species and stocks that scientists said were endangered and should be protected.

One example is the western north Pacific stock of sperm whales for which the Scientific Committee recommended a zero quota. Canada supported proposals for a zero quota and voted NO to proposals for quotas higher than zero. Since there was insufficient support within the Commission to adopt a zero quota as recommended by the Scientific Committee, Canada indicated its preference for a special meeting to consider the issue, rather than adopting a large quota contrary to the scientific advice.

Paradoxically, many Commission members who voted for the proposed moratorium of all commercial whaling and moratorium on the taking of sperm whales, voted in favour of a quota of 890 sperm whales from the western north Pacific stock, against the advice of the Scientific Committee.

Canada also supported scientific

Remains of giant whale unearthed

Scientists from Louisiana State University have recently uncovered the remains of a whale believed to be 45 million years old.

Only the animal's skull--122 cm wide --has been found. The enormous skull is the only complete specimen belonging to *Basilosaurus cenoides*, a whale that grew to a length of over 180 metres. Blue whales (*Balaenoptra musculus*), the largest mammals now in existence, grow to no more than 35 metres.

Some of the last whales to be taken commercially by Canadians were hauled out of here, Coal Harbour on northern Vancouver Island, in the mid-1960s.

advice for zero quotas for both the Bering Sea stock of bowhead whales and the humpback whales which are taken in aboriginal subsistence fisheries in Alaska and Greenland respectively. Again, many countries which supported the moratorium proposals voted to allow continuation of these takes; this, despite the scientific evidence that the bowhead whale is the most endangered species of whale and that the Scientific Committee had for the fourth year advised that the only safe course for the Bering Sea stock was for a zero quota.

Control Over Whaling

Countries such as Canada which are not engaged in commercial whaling now constitute a majority of IWC members. The Canadian position at the IWC has been strongly influenced by the need to consolidate and expand the Commission's control over whaling countries through rational and scientifically-based management measures. The recent adherence to the Convention by Peru, Chile, Spain and Republic of Korea is a result of such efforts.

Canada is concerned that pressure to adopt anti-whaling measures across the board, with no scientific basis for doing so, could nullify the gains made in recent years in achieving proper stock management. Such irrational action could force whaling nations to lodge objections or to withdraw from the IWC. This would result in a return to largely unregulated whaling. It is also Canada's view that support for scientifically unjustified moratorium proposals would be contrary to the intent and purpose of the present Convention which was concluded in order to provide for the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry.

The Government of Canada intends to maintain a whaling policy governed by the best available scientific advice and the principles of rational resource management and conservation.

Trading memories at December's retirement party.

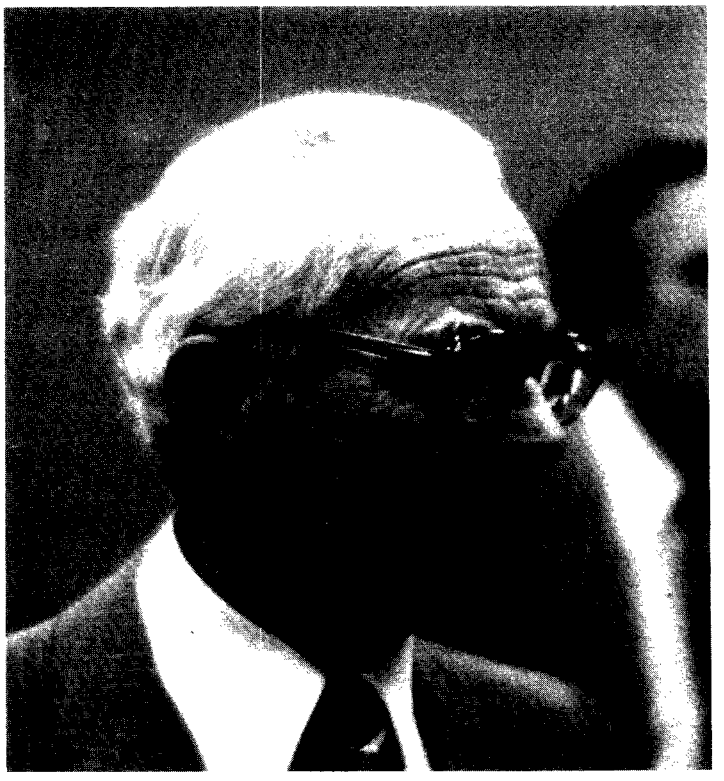
Rod Hourston retires

Parting shots

Rod Hourston retired from the Department in December, 1980, ending an eventful career in, in Fisheries, that spanned three decades. Rod first joined the Department in 1949 as a biologist, after graduating from UBC with an MA in zoology that same year. During the 1950s he was responsible for planning and supervising the biological programs of the Fish Culture Branch. In 1958 he transferred to Ottawa where he became Chief of the Fish Culture Development Branch. Two years later he was appointed Director of Fisheries, Pacific Region and returned to Vancouver. For 16 years he served as Director until he was called upon to accept a special assignment and since 1976 he has been Director of Intergovernmental Affairs--overseeing the adoption of the 200-mile limit. In addition, he was appointed Chairman of the Pacific Region Licence Appeal Board in 1978.

It is difficult to keep track of all the tasks Rod has been involved with over the years. He served as chairman of the International Pacific Salmon Fisheries Commission between 1969 and 1971. He is a member of the Forestry Advisory Committee of BCIT and an Honorary Life Governor of the Vancouver Public Aquarium. He has also been a member of several international committees concerned with salmon problems on the West Coast and has written a number of papers on west coast fisheries matters. To say that the whole Department will miss him is an understatement. The turnout at his retirement party on December 19 indicated many individuals feel the same way.

photos by Diane Paxton



Rod Hourston

Jack Ellis and Madelaine Holbrook, who worked with Rod for many years.

To my friends at Fisheries:

I was really overwhelmed by your numbers at my retirement party on December 19th and I would like to express my thanks to all of you. I have enjoyed my career in Fisheries and I go into retirement with so many fond memories of my association with the staff both at Regional Headquarters and the Field Units.

Many thanks for the gift - I have already tested it out with great results.

Kindest regards

Rod Hourston,

Of a river, a record run and restricted entry

Rod Hourston shared with those who attended his retirement party three special memories--the most dramatic, the most exciting and the most satisfying experiences of his career. He recounts them here in an interview done shortly before he left the Department.

The most dramatic event was the Babine slide, which we first noticed in the summer of 1952. The fish were late in arriving at the Babine Fence and those that were arriving were all battered. So we chartered an aircraft and had Lou Galley, who was a fishery officer in the area, fly down the river. And there they discovered this massive slide had come down into the Babine River, across from a place called Kispigas, an old abandoned Indian village. There was no road in there--it was 45 miles from Hazelton. They wired Ottawa right away and they immediately passed a $500,000 grant to build a road into the slide and provide materials. When we got into Babine, there was nothing. Now this was late August of '52, and there were very few fish, less than 100,000 I think. All through 1953 we were tagging these salmon to see how many were going to get through, and trying to put in devices to help them up this overfall. I've never been more frustrated. You would be standing there with these masses of salmon just trying to get up, being swept back and milling in the side eddies down below. We figured that year of '53, we lost 800,000 sockeye. By the time we removed the rock, 43,000 cubic yards of it, two runs in a row had been decimated by this slide. So there was no fishing for Skeena sockeye for two years. But it eventually was re-habilitated.

The most exciting event was the 1962 run of pink salmon to what was actually the Bella Coola River, but it turned out to be the whole central coast, right from Butedale, which is area six, Bella Bella (area seven), Bella Coola (area eight). The pinks exploded! Big runs, they come right from the start. You start looking at the catches in early June, and, you know, there were pinks going even then. And they just kept coming. Now, we estimated the run to Bella Coola as 14 million. We knew there were a million spawners in '60, but to get a survival of 14:1 is just incredible. It tells you what these pinks can do if they really decide to explode. They had to put the fishermen on limits. Take a thousand per seine and a hundred by gillnets and by the first set in the morning they'd have the thousand. We went up one day, just before it opened. It opened Sunday night, you see, and Fitzhugh Sound, Burton Channel and up into the Bella Coola, wherever you looked, there were just fishing boats. And we said, "Well, we can look forward to '64 of course!", but it didn't happen again in '64. We had some floods and so on. That was my most exciting memory in Fisheries. They had a big one down on the Fraser in '63 of course. But in terms of the thrill, and of everybody catching fish, and the packers plugged and the plants plugged and American Can kept phoning because they were running out of cans.

Now, I keep thinking, maybe the Fraser River will do it again this year. We had close to four million spawners two years ago. I figure if they come back this year, now, who knows? Pinks can survive. We won't know of course until the end of June, early July. The Fraser can do it. We know from past records that it used to produce three million.

The third event was the most satisfying, and that was being involved in the implementation of limited entry into the salmon fisheries. When Mr. Davis became minister in '67, he was quite interested, as an economist, in trying to rationalize the salmon fishery. It was the same old story--too many fishermen chasing too few fish. We had been talking about limited entry into the salmon fishery for a number of years prior to this. We wanted to make sure there was a living for a good number of fishermen, but at that time it was unrestricted and anybody could wait to July and if they wanted to go fishing they could buy a $10 licence. So Davis had a few meetings and he

memories...

announced on September 6, 1968, there would be no more salmon licences after that date and that only those boats that had landed salmon up to September 6, 1968, would have a licence for 1969. So suddenly we had put the lid on the number of salmon boats. Here was the first limited entry program in North America. Yet when I think of the long-term, the fishermen were quite happy about it.

I had on many occasions the opportunity to travel the coast. Some of my greatest memories were flying into Namu where we'd meet with the fishery officers, on the boat, and make our decisions on the fishing that week and the next week. On a couple of occasions I went right from Prince Rupert on the "Howay." The geography is just fantastic, its a fantastic coast. At one time there were about 50 or 60 canneries along the coast and you could still see the remnants--River Inlet, Goose Bay. That's what remains in my mind--the beautiful coast we have.

Johnstone Strait Blues

as sung by Bruce McDonald (to the tune of Honky Tonk Blues)

A big mean fisherman came into my office,
He says I want to take you outside for a fight
But another delegation comes behind him,
They say we phoned ahead & the line forms to the right

Chorus: Its those seine boat fishermen,
Gimme, gimme, gimme the Johnstone Strait Blues

Well they asked my rec'mendations for the Straits now,
I said not much fish show'in here,
how about down there
They say the rivers lookin poorly and we need some for the farmers*
Closed for the balance up there friend.

Chorus: Its those seine boat fishermen,
Gimme, gimme, gimme the Johnstone Strait Blues

The next day the delegation came to my office,
Says what you doin starvin us you cruel man
They say we phoned your supervisors in Vancouver
They told us you're the ones to blame
kill'em if you can.

Chorus: Its those seine boat fishermen,
Gimme, gimme, gimme the insane Johnstone Strait Blues

Well if they get us take our story to the outside,
And tell'em that we tried to do whats right
But up on Johnstone Strait there aint no winners,
Not fish, not fishermen and specially not the Bogeyman.*

Chorus: Its those seine boat fishermen,
Gimme, gimme, gimme the Johnstone Strait Blues.

G. Bruce McDonald
Fishery Officer
Alert Bay Subdistrict

*Farmers - Fraser River gillnetters
*Bogeyman - Alert Bay term for Fishery Officer

Bulletin New program begins

A Human Resources Management Program for the Pacific and Freshwater Fisheries Regions received full approval at a Directors-General meeting in Vancouver January 20.

Fred Iviney, former manager of the Personnel Division who is on secondment to head the new program, called it "a significant step forward in the ongoing development of Pacific and Freshwater Fisheries."

"It is the first recognition that management skills are as essential as any other skills. This is also being recognized in government policy that will soon be introduced," he said.

The program will provide:

- upgrading of managerial skills at all supervisory and managerial levels.
- an organizeo approach to the forecasting and utilization of limited training and development resources.
- a process to identify and develop high potential employees for future managerial roles.

In approving the implementation of the program, Assistant Deputy Minister Doug Johnston noted the importance of the Performance Assessment and Employee Appraisal Process as the cornerstone on which any meaningful human resource management program is built.

The initial catch-up phase will be completed in fiscal year 1981-82, depending on available funds. All directors-General committed their support to the principles of the program. The second stage of the program will require that all newly appointed managers undertake management training appropriate to the level of their appointment.

In addition to management training. upgrading normal employee skills and new recruit training will continue as required.

"In talking to managers in the field," Fred said, "they see it as a program that should have been adopted ten years ago."

Members of the Human Resource Management Working Group will be visiting the regions in February to further explain the program. Additional information about the program can be obtained from Acting Personnel Manager Gary Norberg or from Working Group Manager Fred Iviney at 666-1385.

Mike Youds,
with information from Fred Iviney.

Management training continues

The first in-house "familiarization" course for Pacific Region supervisors was held in November, 1980. The course, about 3 1/2 days in length, was designed to provide a basic appreciation of the systems used in the areas of personnel (pay & benefits, classification, staffing, staff relations, employee appraisals), finance and administration. There is also an orientation module outlining the role of the department and its interaction with other departments, a presentation of safety practices, and films on supervision and time management. The pilot session was well received by course participants, and two subsequent sessions will be run later. Although the course was initially intended for "new" supervisors, managers at all levels are welcome to attend.

Course modules are presented by departmental employees with the exception of the module on safety practices, which will be presented by a safety officer from Labor Canada.

Courses will be arranged on a demand basis, with approximately 15 participants per session. The content may vary slightly, depending on the availability of resource persons for presentation of their respective subjects.

Employees wishing further information may contact me, the course coordinator, at the staff Planning and Training Office (666-6286).

Hilary Schwenk
Staff Planning and Training Officer

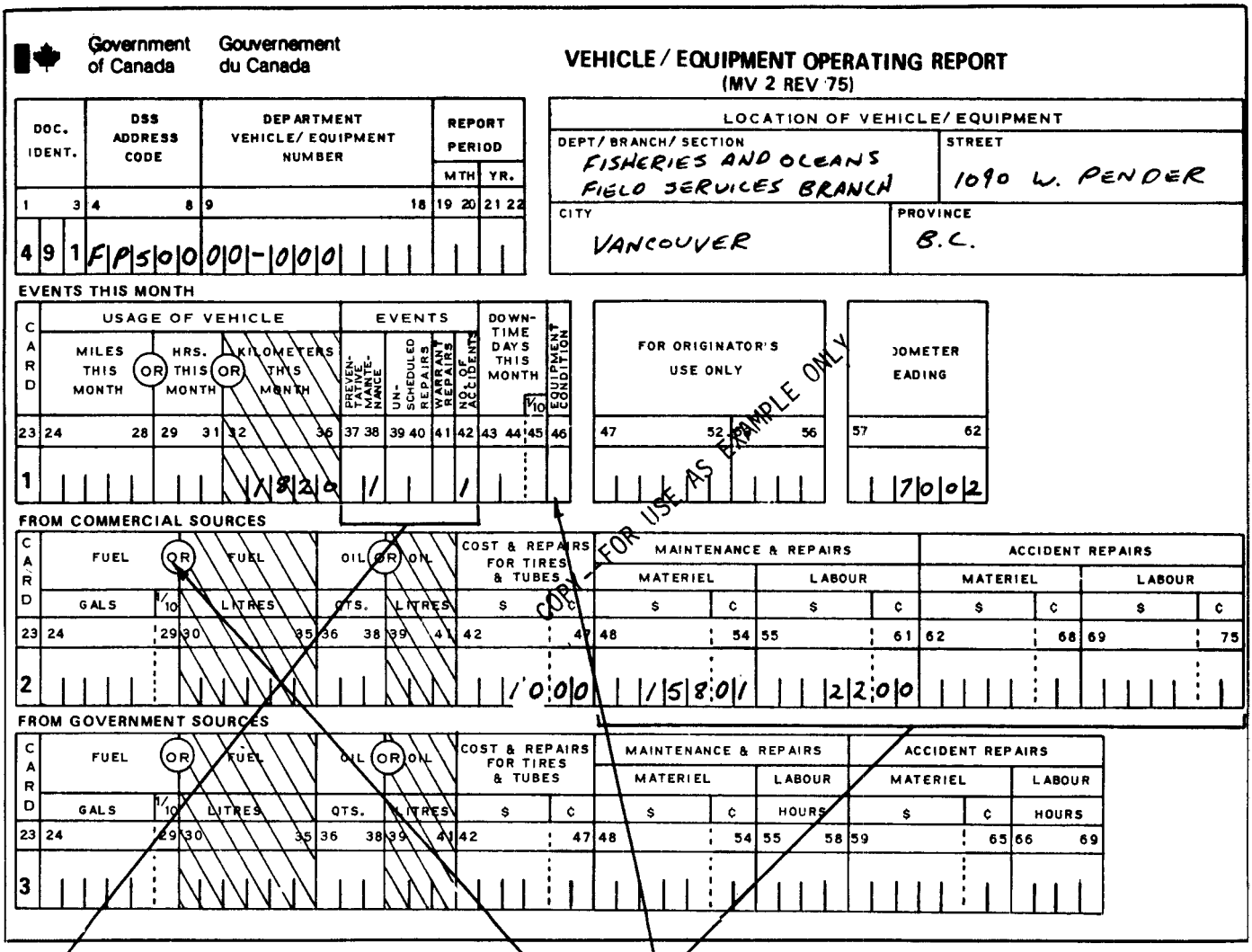
What you can expect

by Pat Phillips

The M.V. 2--it's not a Soviet missile but a form number for the Vehicle/Equipment Operating Report. There is a high incidence of error in completing this form and I believe the mistakes can be avoided if I take the time to explain some of the procedures. The M.V. 2 is not a difficult form to complete.

These forms must be submitted as soon as possible after the end of the month.

I will be covering the proper completion of accident report forms in next month's *Sounder*.



Government of Canada / Gouvernement du Canada

VEHICLE / EQUIPMENT OPERATING REPORT
(MV 2 REV 75)

DOC. IDENT.	DSS ADDRESS CODE	DEPARTMENT VEHICLE/ EQUIPMENT NUMBER	REPORT PERIOD MTH	REPORT PERIOD YR.
491	FP5	00-0010		

LOCATION OF VEHICLE/ EQUIPMENT

DEPT/ BRANCH/ SECTION	STREET
FISHERIES AND OCEANS FIELD SERVICES BRANCH	1090 W. PENDER
CITY	**PROVINCE**
VANCOUVER	B.C.

EVENTS THIS MONTH

CARD	USAGE OF VEHICLE: MILES THIS MONTH (OR) HRS. THIS MONTH (OR) KILOMETERS THIS MONTH	EVENTS: PREVENTATIVE MAINTENANCE	UNSCHEDULED REPAIRS	WARRANT REPAIRS	NO. OF ACCIDENTS	DOWN-TIME DAYS THIS MONTH	EQUIPMENT CONDITION	FOR ORIGINATOR'S USE ONLY	ODOMETER READING
1	1820	1		1					7002

FROM COMMERCIAL SOURCES

CARD	FUEL GALS (OR) FUEL LITRES	OIL QTS. (OR) OIL LITRES	COST & REPAIRS FOR TIRES & TUBES $	COST & REPAIRS FOR TIRES & TUBES ¢	MAINTENANCE & REPAIRS MATERIEL $	MAINTENANCE & REPAIRS MATERIEL ¢	MAINTENANCE & REPAIRS LABOUR $	MAINTENANCE & REPAIRS LABOUR ¢	ACCIDENT REPAIRS MATERIEL $	ACCIDENT REPAIRS MATERIEL ¢	ACCIDENT REPAIRS LABOUR $	ACCIDENT REPAIRS LABOUR ¢
2			100		1581		2200					

FROM GOVERNMENT SOURCES

CARD	FUEL GALS (OR) FUEL LITRES	OIL QTS. (OR) OIL LITRES	COST & REPAIRS FOR TIRES & TUBES $	COST & REPAIRS FOR TIRES & TUBES ¢	MAINTENANCE & REPAIRS MATERIEL $	MAINTENANCE & REPAIRS MATERIEL ¢	MAINTENANCE & REPAIRS LABOUR HOURS	ACCIDENT REPAIRS MATERIEL $	ACCIDENT REPAIRS MATERIEL ¢	ACCIDENT REPAIRS LABOUR HOURS
3										

COPY - FOR USE AS EXAMPLE ONLY

To be completed with number of times each month.

All costs of maintaining a vehicle, whether by purchase order or credit card, must be included. If costs are obtained after submission of a report, they must show on the following month's report.

How new is the item? Judge on the basis of one to ten.

Some stations use gallons. Use tenths only if fuel is being dispensed in gallons. When entering quantities in litres, do not use tenths. Instead, round the quantity to the nearest whole litre.

Spurious emissions

Winner of the recent competition for Acting Director, Field Services Branch, is Don Wilson, formerly Chief, Inspection and Special Services Division.

* *

Garnet Jones was the successful candidate for the position of International Advisor.

* *

Newcomers to SEP Planning are Annar Karim, who has joined the Systems Group Diane Andiel, who is data collector for the Enhancement Planning and Information Control system (EPIC) and Binder Sidhu who joined SEP Economics to assist with the operation of the production model and data administration.

* *

Other staff changes in SEP include: Don McQuarrie, the new head, Community Development. Don was formerly a support biologist with SEP Operations; Marcia Small, the new secretary with Special Projects Division and Miriam Beaton, the new administrative clerk, also in Special Projects Division; Robin Dickson, who won the recent competion for stock enhancement officer, Upper Fraser River Chinooks;

* *

Recent arrivals include a son, Michael Daniel, born December 30th to Loraine and Gary Logan, biologist, Special Projects Division, SEP.

* *

Married December 31, 1980 Shirley Nyce, District Clerk, Kitimat, to Louis Long.

* *

Staff changes in Field Services Branch include: Judy White, who was the successful candidate for position, Supervisor, Licencing Unit, Mike Farbatuk, administrative clerk in Pat Phillip's shop; Wally J. Elias, who has been promoted from Quesnel to Kamloops as assistant district supervisor; and fishery officer moves include Mike Weston, who has moved from Surrey to Tahsis and Richard Grindrod, who has moved from Bella Bella to Surrey.

Scotty Roxburgh, Whitehorse fishery officer, was married October 11 to Kathy Shamlock on board the luxury yacht "Norsal" in English Bay, Vancouver. The "Norsal" is the ship recently hired by Greenpeace to protest supertanker tests in the Strait of Juan de Fuca.

* *

When does a kid become a superkid?

When he or she comes from Arthur Stevenson Elementary School in Kamloops and helps save the salmon in Noble Creek. The January issue of *Owl Magazine*, the outdoor and wildlife discovery magazine (published in Toronto) for children, features the grades five, six and seven children of Arthur Stevenson as its 1980 superkids award winners. Their initiative and hard work on the Noble Creek enhancement project won them the award.

more Spurious...

Al Klymochko, fishery officer, Nanaimo, left the service January 29, 1981 to go into the taxidermy business in the Interior.

* *

Rumour is that Don Anderson is seriously considering entering the carpentry trade in Prince Rupert.

* *

Visitors to Vancouver in recent weeks were Sandy Argue, who's visiting Vancouver from New Caledonia, and Roger Kearns, who says he's moving to Victoria. Sandy says he'll provide a *Sounder* story on his work with skipjack tuna in New Caledonia.

* *

Retired from the Department at the end of the year were W.R. (Rod) Hourston, international and governmental affairs advisor and Les Goodman, supervisor, Kamloops District. Best wishes to both of you.

* *

Dr. Chuck Chestnut has joined the Department on an eight-month sabbatical from BCIT; he will be a assessing the roles and duties of technical staff within all branches of the Department in terms of training programs provided by BCIT. We understand that Dr. Chestnut will be travelling in the field to meet with staff and to gain a first-hand understanding of duties and responsibilities of various jobs.

* *

Married on December 13, 1980 in Whitehorse, Burt Ionson to Diane Widdecombe.

* *

Charles Campbell has been appointed acting chief, Inspection and Special Services Division while Ian Devlin has been appointed acting operations manager in the same division.

Staff who are interested may attend a six-week training course on how to use the Apple micro-computers. The course will be held in the 11th floor boardroom at 1090 West Pender every Tuesday and Thursday afternoon from 1 to 3 pm (February 24 to April 2). The first two weeks will cover the use of the computer and the last four weeks will cover programming. For registration call Rosemary Pogue at 666-2094.

Copper rockfish, sebastes caurinus is common on the West Coast. Photo was taken by Rick Harbo, project manager with the Water Quality Unit. He encountered the fish on a diving trip near Texada Island.

SOUNDER

Newsletter of the Department of Fisheries and Oceans, Pacific Region

Volume IX Number 2 March 1981

Saving the Fraser chinook

Senior Management Biologist Robin Harrison wrote the following article for Sounder *in early March. Since then, a subcommittee of the Sport Fish Advisory Board has been struck to review the proposed conservations measures and to come up with more satisfactory options.*

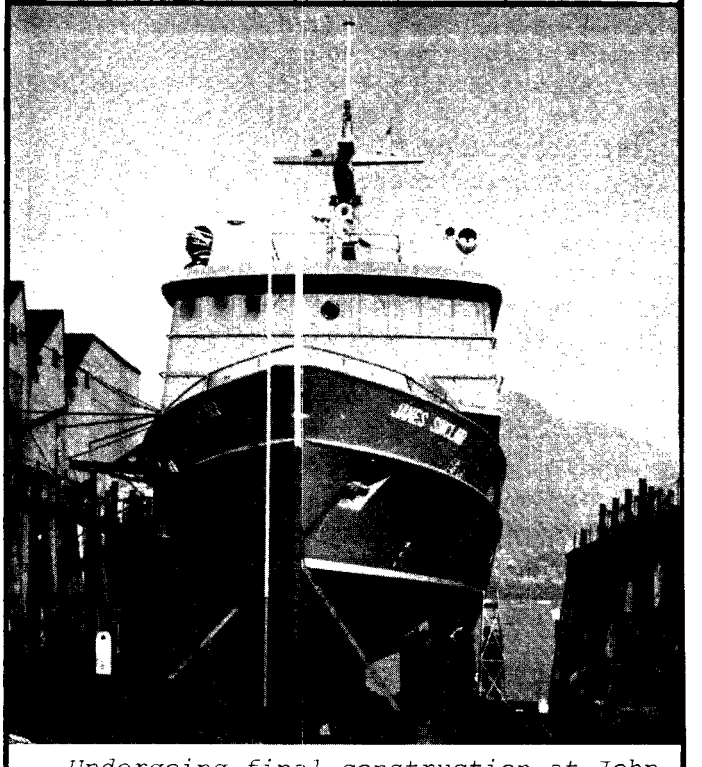
The recent regulatory changes proposed in aid of chinook conservation have provoked a storm of protest from both the sport and commercial fishing sectors. This reaction was predictable as some of the measures are severe, unprecedented and controversial. The livelihood of many individuals will be substantially affected, as will the recreational pursuits of many others. Why were these controversial measures necessary?

Although the chinook "problem" is coastwide, it is best exemplified by examining the situation in the Fraser River, the largest natural producer of chinooks in British Columbia. The Fraser River commercial gillnet catch serves as a good indicator of the trend in the return of chinooks to the river over the years. The catch from 1951 to 1955 averaged 155,000. The average catch for each successive five-year period declined steadily, reaching 105,000 during the 1966 to 1970 period and averaging only 63,000 from 1976 to 1980. From 1951 to 1972 the catch fell below 100,000 in only four years. Since 1972, it has never exceeded 95,000. The 1980 catch was only 38,000, a record low.

The reason for the drastic decline is twofold. Over the years there has been a reduction in the number of allowable days for fishing and the implementation of restrictions for mesh size. More importantly though, is the decline in the number of mature fish returning to the river on their way to the spawning grounds. The total return of chinook (including commercial, sport, Indian food fishery and spawning ground escapements) declined from 230,000 in 1970 to 110,000 in 1980, approximately six percent per year. During this period, the number of salmon reaching the spawning grounds has remained relatively stable only because of restrictions imposed primarily on the commercial fishery in the Fraser River and vicinity.

If the number of spawning chinook has not declined, why has the return to the river shown such a downward trend?

continued on page three



Undergoing final construction at John Manley Shipyards in Vancouver is the FPV James Sinclair.

Mohammed goes to the districts

On pages seven through 13 of the March *Sounder*, there is featured an important new addition to the newsletter--the district report. Brief and informal, the district report will be a regular part of *Sounder*, and with enough cooperation it could help overcome difficulties with internal communications.

In the past, *Sounder* has come dangerously close to failing to achieve its original purpose. *The Sounder is a "sounding board", a medium though which Pacific Region staff can communicate with one another and express ideas on any topic they believe to be important.* To no one's surprise those ideas most often involve the resource, a fact that suggests Pacific Region staff are a dedicated group of people. The problem is that the region is vast, the staff are dispersed and often isolated. The *Sounder* tends to speak for a certain office in downtown Vancouver.

The March district report features the New Westminster district. The report will probably not solve any problems (it may create a few.) Next month's report will cover the Whitehorse district. Somewhere between the two districts there is a solution. *--Editor*

The insurance that burns

During the course of their move to Prince George last year, everything Fishery Officer Larry Ottman and his family owned was destroyed by a fire. Here he explains what he learned about insurance.

When moving, most people half-heartedly look over their "insurance coverage of removal" forms and feel that they're covered. So that other Department staff are not caught short, here is what the form means:

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Government of Canada / Gouvernement du Canada
Fisheries and Oceans / Pêches et Océans

1) The moving company will insure your belongings for 30¢/lb. An average family has about 6000 lb., which means you get a total of $1800.00! It means your 400 lb. antique piano is worth $120.00.

2) In addition, the government of Canada , through a private insurance company, will insure your belongings to a maximum of $25,000.00 depreciated value. This means that they take the replacement value of your antique piano, depreciate the value by x percent/year and by condition, and that is what you get. In no case will the company pay more than the original cost of the piano even though it may have tripled in value.

3) You must supply the insurance company with a list of lost or damaged items. (It could be your entire household) plus the original cost of each item plus the replacement cost of each item. This is very time consuming and expensive if holiday or company time is required to complete the list.

My advice to anyone considering a relocation is:

1) Determine the value of your possessions (it will scare the hell out of you).

2) Make sure that your possessions are insured for replacement cost for your relocation. This means that you are

covered for the cost of replacing that item at today's prices. Check and see--sometimes this is covered under your present house insurance.

I have a friend who completed virtually the same transfer as myself, and he insured his entire household for a two-week period during the relocation (for replacement cost) for $30.00--pretty cheap for what it can cost you.

3) Finally, take your most valuable and prized possessions with you, so that they receive the security and care that they deserve.

I hope that everyone reads this article, and that someone benefits from it in the future.

Larry Ottman
Fishery Officer
Prince George

Fraser chinook...

The answer lies outside the Fraser River. Chinook salmon from the Fraser and the Georgia Strait are exploited in a number of fisheries from Puget Sound to Alaska, and some of these fisheries have expanded substantially in recent years. It is estimated that of the total catch of Fraser River chinook, 32 percent are taken by the sport fishery in the Strait, 19 percent by the Strait troll fishery, 9 percent by the Fraser River gillnet fleet and 40 percent by other fisheries. The exploitation rate is estimated to exceed 90 percent. The Georgia Strait sport fishery is by far the largest single user group, with a catch of chinook that has approximately tripled over the past ten years to at least 500,000, with some estimates ranging as high as 750,000. The sport fishery harvests mainly immature two and three-year-old chinook, so the impact of harvesting these year classes is not felt in the river for another year or more. The decline in the decline in the number of maturing chinook entering the river is therefore a result of higher exploitation rates on outside fisheries.

Although the decline in the chinook return has been apparent for a number of years, the seriousness of the situation in the Fraser River became particularly evident in 1980, when below average catches were taken early in the season in the gillnet fishery. This led to an early closure of this fishery and a subsequent chinook sport fishery closure in the Fraser River and environs. It was apparent that a substantial reduction in the harvest rate was essential, particularly in outside fisheries, if the downward trend was to be halted and reversed. The recently announced conservation measures are designed to do just that.

While it is extremely difficult to forecast how many additional fish will reach the spawning grounds as a result of these measures, it is expected that in 1981 the Fraser River escapement could be increased by up to 30,000 chinook. Most of this will result from measures being implemented within the Fraser River although there will be some effect from Georgia Strait sport and troll regulations. The benefits from changes to these latter fisheries will accrue mainly in later years and are expected to be substantial.

What is the outlook? Unless the total exploitation rate is brought down to some lower level and held there indefinitely we will find ourselves in the same situation as at present, faced with declining returns. It is therefore necessary that some form of restrictions on the major user groups be made permanent. What form they will take is unclear at present. The desired situation, as I see it, involves a sufficient reduction in the outside exploitation rate to enable viable fisheries for sockeye and pink salmon to be conducted in the Fraser River without overharvesting chinook. Reinstatement of river sport fisheries for chinook is also desirable. If we are able to achieve spawning escapements closer to optimum, the total number of fish available for harvest should be greater than at present. Viable sport and troll fisheries in Georgia Strait will still be possible in spite of some restrictions. The proposed conservation measures should go a long way toward achieving this goal.

Robin Harrison
Senior Management Biologist

SEP optimistic about production

With Enhancement Operations now operating 26 projects ranging from gravel boxes, flow-controlled rivers and spawning channels releasing fry, to sophisticated rearing systems releasing smolts, SEP fish production has been steadily climbing in 1980-81.

Last fall, 563 million eggs were obtained from five species of salmon at SEP facilities. Of this total, 69 million are incubating in artificial containers while the remainder, all of which are chum or sockeye, are developing in regulated stream or spawning channel environments.

Two new hatcheries, Chilliwack and Nitinat, started operations in 1980. The first year was designated a trial period, so production targets were set well below capacity. At the 16.5 million-egg capacity Chilliwack River hatchery, 900,000 chum and 150,000 coho eggs were taken. At Nitinat River hatchery, where facilities are designed for 29.5 million eggs, approximately 97,000 chinook and 2,700,000 chum eggs were incubated.

In addition, two projects were rejuvenated last fall. Thornton Creek hatchery was reopened after a one year closure in response to an unexpectedly good return of chum salmon and a successful terminal fishery. Unfortunately, only 350,000 chum eggs of the 1.7 million taken survived a hatchery water supply failure in early January. We anticipate that even this moderate number of eggs will generate a significant return in 1983 and 1984. Bear River hatchery, constructed as a pink salmon research facility in the mid 1970s, was operated as a production unit in 1980 with an egg-take of 2 million pinks. Plans are to repeat this operation in even years.

Three chinook salmon pilot projects were initiated in 1980 to provide information essential for planning enhancement strategies in northern B.C. and the Upper Fraser. Gravel incubation boxes at three locations were loaded with eggs from the Bowron (45,000) and Slim (57,000) stocks, both in the Upper Fraser, and the Kalum stock (67,000) in the Skeena drainage.

From facility operations, the projected production of salmon and steelhead trout (1980 brood) to the fisheries, plus escapement, is 3,203,000 pieces (Table 1). These estimates are based on biological standards derived from past experience for use in SEP planning. Overall, projections for the 1980 brood production are only two percent greater than for the 1979 brood despite additional facilities and more successful egg-takes. Looking more closely at Table 1 reveals, however, that production of all species except sockeye increased. All the sockeye production is from the Babine facilities on the Fulton and Pinkut rivers. In 1980, the Babine sockeye spawning grounds were under-seeded due to less than optimal escapement--this is the reason that projected sockeye production has decreased by 31 percent. Considering species other than sockeye, the

Table One:

Projected returns from 1979 and 1980 brood production at Enhancement Operations facilities.

	Projected Production (Pieces)		
Species	**1979 Brood**	**1980 Brood**	**Increment**
Coho	605,000	691,000	+ 14%
Chinook	459,000	474,000	+ 3%
Pink	75,000	204,000	+172%
Sockeye	1,500,000	1,030,000	- 31%
Chum	493,000	793,000	+ 61%
Steelhead	8,000	11,000	+ 38%
Total	3,140,000	3,203,000	+ 2%
Total excluding sockeye	1,640,000	2,173,000	+ 33%

projected 1980 brood returns of 2,173,000 pieces are 33 percent greater than the projected 1979 brood returns.

In a year when winter floods may have devastated natural spawn, it is somewhat reassuring that many stocks are protected in hatcheries and other facilities. In 1980, 564 million salmon and steelhead eggs were in the care of SEP operations staff. Production will continue to increase as existing capacity is 895 million eggs.

Ted Perry,
Bio-program coordinator,
Enhancement Operations

And more in store by '84

There's a lot on the books for the rest of SEP's Phase I. Addressing Department-staffed facilities only, new hatcheries projected to be completed by the end of 1984 will have the capacity to provide additional total adult returns of about 383,000 chum, 307,000 chinook, 243,000 coho, 1,010,000 pink, 4,000 sockeye, 5,000 cutthroat, and 7,000 steelhead, or 1,959,000 pieces in total. Techniques proposed vary with the facility (see table), but the following general trends are in evidence.

1) Except for some Pallant-style incubators at Kitimat, the Japanese method of chum culture is being followed.

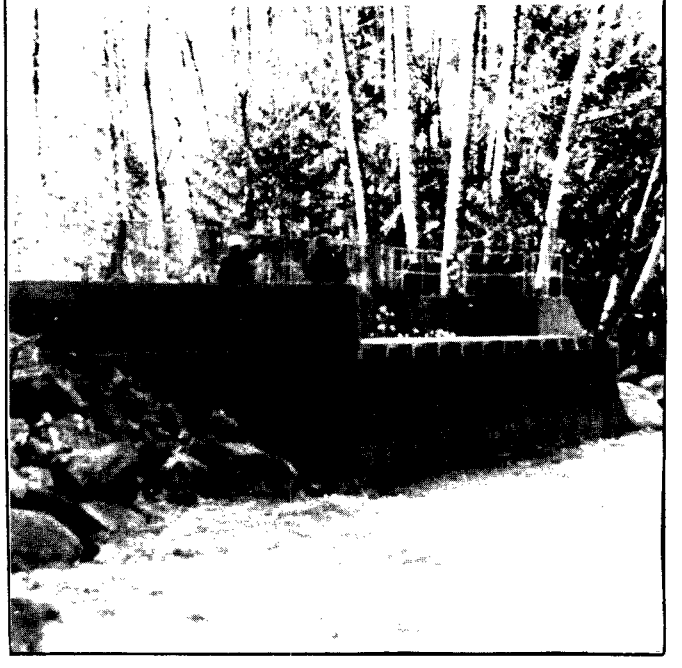
2) Chinook and coho culture is mainly conventional, consisting of Heath trays for incubation, Capilano-style troughs or start-up ponds for initial rearing, and raceways or earthen channels for final rearing.

3) Due to management constraints, most of these facilities must deal with multiple stocks within their area, rather than developing a single hatchery-return stock. This will involve a variable amount of rearing back at the donor streams.

4) Aside from the Glendale spawning channel for pinks, only limited numbers of pink and sockeye will be cultured experimentally.

5) Several pilot facilities are in place on potential Phase II sites, and will be used to evaluate general site suitabilities, coldwater rearing techniques, and satellite hatchery rearing concepts.

Main building at new Chilliwack hatchery (above), and water intake.



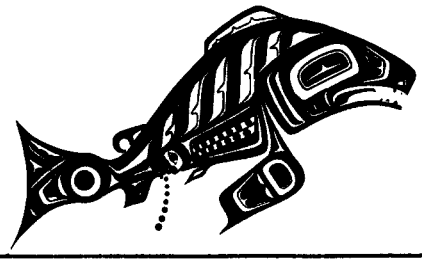
More in store...

Before completion, many of these facilities will undergo pilot egg-takes in the fall of 1981.

Bruce Shepherd,
A/New Projects Coordinator,
Facility Operations

PHASE 1 FACILITIES — 1981 AND BEYOND

Tentative Production Targets



Year of Completion		Species	Eggs (000's)	Adults (000's)[a]	Methods[b]
MAJOR FACILITIES:					
1981	Tenderfoot	CN	150	15	HT, CAP, CH
		CO	464	10	HT, CAP, CH
		SH	140	1	HT, CAP, FP
1982	Quesnel	CN	3,917	65	HT, CAP, RW, SAT
1983	Chehalis	CM	14,000	200	JS
		CN	3,000	65	HT, CAP/SU, RW
		CO	750	64	HT, CAP, CH, SAT
		CT	42	5	HT, CAP, RW
		SH	240	5	HT, CAP, RW
1983	Eagle (S. Thompson)	CN	750	12	HT, CAP, RW, SAT
		CO	560	56	HT, CAP, RW, SAT
1983	Glendale	CM	1,736	25	JS, SAT
		CN	2,525	40	HT, CAP, FP
		CO	1,157	25	HT, CAP, FP
		PI	80,000	1,000	SP
1983[c]	Kitimat	CM	11,000	158	JS/PS
		CN	2,987	65	HT, CAP, RW
		CO	592	60	HT, CAP, RW
		PI	500	10	PS
		SX	500	4	PS
		SH	55	1	HT, CAP, RW
1983	Tete Jaune	CN	1,400	20	CH/INS
1983	N. Thompson	CN	1,250	20	HT, CAP, RW, SAT
		CO	281	28	HT, CAP, RW, SAT
PILOT FACILITIES:					
1981	Bowron	CN	100	1	GI, CAP, FP
	Kalum	CN	200	2	GI, CAP, FP
	Penny (UPFR)	CN	100	1	GI, CAP, FP
	Swift	CN	100	1	GI,
	TOTALS:	CM	26,736	383	
		CN	16,479	307	
		CO	3,804	243	
		PI	80,500	1,010	
		SX	500	4	
		CT	42	5	
		SH	435	7	

KEY:

c = does not include surplus attributable to increased natural spawning
b = Kitimat pilot has been operational (50-150 CN eggs) since 1977
CAP = Capilano-style rearing trough
CH = earthen rearing channel
FP = fry planting
GI = deep gravel incubator
CN = chinook
SH = steelhead
PI = pink
CT = cutthroat
HT = Heath tray incubator
INS = Improvement of natural spawning ground
JS = Japanese-style (Atkins incubator, keeper, rearing raceway)
PS = Pallant-style shallow-matrix gravel incubator
RW = raceway
SAT = satellite rearing
SP = spawning channel
SU = raceway start-up pond
CO = coho
CM = chum
SX = sockeye

New Westminster

Keeping up with the metropolis

This is the first in a series of regional reports that Sounder *will be providing on a district-by-district basis during 1981.*

District Report

The old colonial capital of New Westminster is an unlikely setting for the headquarters of the busiest, most volatile district in the Pacific Region of Fisheries. But, from a scrambled set of offices above the Post Office on Columbia Street, field staff manage a variety of complex and diversified fisheries in an area containing half the population of British Columbia.

The New Westminster office is, of course, augmented by the offices of seven sub-districts. District Supervisor, Grant Scott, oversees the activities of fifty staff members. Yet each member of the staff will insist that fifty are not enough.

"The staff we have are no longer capable of carrying out routine patrols, action requests or telephone inquiries," says Don Aurel, assistant district supervisor in New Westminster.

New regulations affecting gillnet fishermen on the lower Fraser will mean a busier spring for New Westminster fishery officers.

"We're basically just firefighting on a 24-hour basis. A lot of people are out all night."

The sport fishery is indicative of the overall situation. The district includes the Fraser River west of Boston Bar, Howe Sound and the Squamish watershed, the Harrison, Lillooet and Birkenhead River systems. Year-round sport fishing takes place throughout the area and a population of 1.3 million people represents a huge, resident angler population. At the height of the season, the mouth of the Capilano River is choked with recreational fishing boats. In spite of this, only one fishery officer in the New Westminster district covers the sport fishery, and that is on a part-time basis out of an office in Horseshoe Bay.

The New Westminster District moves at an accelerated pace because everything in the district *is* accelerated; accelerated development, population growth and resource demands that result in accelerated declines in fish stocks and habitat quality.

The proximity of the district to Pacific Region headquarters results in additional demands being placed on staff. Although the district has no herring fishery, five New Westminster fishery officers are currently assisting with that task in other districts. It is far more convenient for staff at Regional headquarters to seek the assistance of a New Westminster fishery officer than to depend on the help of one in Whitehorse, Kamloops or Campbell River.

The view from the New Westminster offices presents a scene of intense industrial activity surrounding the opaque waters of the Fraser River. The Fraser, draining the Pacific Region's largest watershed, is the principal element in regional management. The size of the river and clarity of its water symbolize New Westminster District's hectic workload.

Sport fisheries growing

Increasing participation in the Lower Mainland tidal sport fishery in recent years has increased the workload and enforcement problems faced by fishery officers. In 1980 the four Lower Mainland subdistricts had 175,000 angler-days (a conservative estimate) with 42,000 salmon landed by sport fishermen. In one day alone, approximately 3,600 boats concentrated in lower Howe Sound and English Bay during the 1980 "Sun" fishing derby.

In addition to the salmon sport fishery the district has a substantial sport smelt and crab fishery. The smelt fishery may have up to 320 participants on a weekend during the smelt run from May to September. Crab fishermen hang traps off any accessible dock in Burrard Inlet, English Bay, Steveston and Boundary Bay.

With a large area to cover and a large number of participants, enforcement takes up a large portion of the fishery officer's time. SEP projects have, unfortunately, added to the enforcement load, especially in the area of the Capilano hatchery. Fishermen who are increasingly frustrated by "hook shy" coho, which are usually visible schooling off the mouth of the Capilano River during the summer, go to great lengths to catch them. Some fishermen even venture into the hatchery.

Enforcement of the crab and smelt fishery can be very frustrating. Participants in these fisheries are almost exclusively new Canadians and at times language can be a problem. In addition, these two fisheries usually take place throughout the night. Charges of exceeding the limit and of possession of undersized crabs are common. In the past year, three crab fishermen were caught with 183 crabs. Only four were legal size.

With increasing pressure on the sport fishery and new regulations coming into effect, more and more manpower and equipment will have to be assigned for the sport fishery. We hope adequate manpower and equipment will be forthcoming to meet the enforcement requirements of the new sport fish regulations and tidal sport fish licence program.

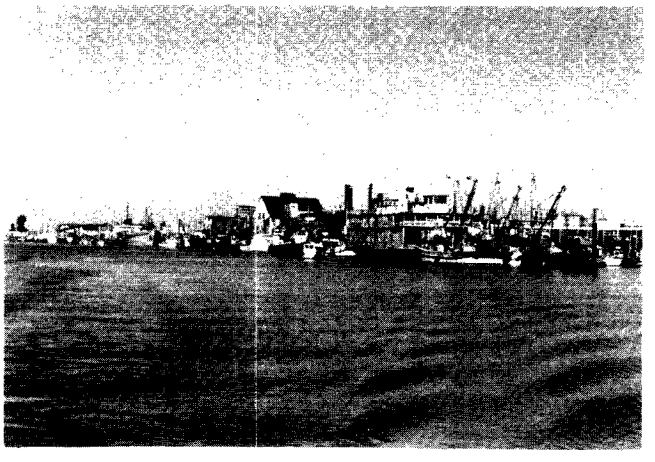
Tim Young,
Fishery Officer,
New Westminster

Patrols must increase

Illegal fishing, or poaching, is a very popular, sometimes profitable recreation in the New Westminster District. Illegal fishing and the selling of those fish attracts both Indians and non-Indians. In the last few years, the practice seems to have become more sophisticated and organized. Enforcement of the regulations dealing with poaching has also become complicated, as well as dangerous. This could be partially attributed to the increase in the profits realized from the sale of illegally caught fish. In relation to the poaching penalties usually received by the courts, the profits are high.

Illegal fishing, whether it is done for personal use or for future sale, is a very difficult one to deal with. Increased resources to carry out more enforcement patrols by both vessel and vehicle will be required to decrease the frequency of poaching.

Don Ross,
Fishery Officer



Bustling waterfront near Steveston necessitates an intensified enforcement effort.

Native food fisheries

Unlike the native food fisheries in some of our other districts, the native food fishery in the New Westminster district is a year-round fishery, but catches are heaviest between May and December.

Participation in the native food fishery is on the increase. The number of licences issued was up 52 percent in 1979 from 1971, while catches were up 56 percent between the same years. Catches were down considerably in 1980 due to low return of all species.

The New Westminster district is in the middle of an area of dense population that generates many enforcement problems in the native food fishery. Although there were only 28 Indians charged with offenses in 1980, there were many more non-Indians charged with offenses dealing with the fishery. Many of the 28 natives are repeat offenders. This bears out the theory that a large percentage of the Indian food fishermen do not abuse the fishery and only take the amount of fish necessary for their families. There is a small percentage of the licence holders who fish constantly and catch a large portion of the total catch. These fish usually find their way into the market.

Other problems associated with the native food fishery in the New Westminster district involve Indian band by-laws, which give Indians the legal authority to manage fish on their reserve. Enforcement inconsistency from district to district and public indifference towards laws prohibiting the purchase of native food fish create additional problems.

Don Ross,
Fishery Officer,
New Westminster

Too many crab lines

One of the more attractive seaside activities in the Vancouver area is the recreational crab fishery. Crab fishing takes place anywhere where there are crabs and where the public has access to the water. It is estimated that there are 50,000 fishermen-days in crab fishing in the District. The fishery occurs almost daily throughout the entire year on a round-the-clock basis. The total sports catch is about 100,000 crabs annually.

This fishery contributes to the greatest number of violations in the district for a single user group. In subdistrict two we have had as many as 20 persons in court on a single day for sport-fish crab violations. Even when penalties have ranged as high as $1,000 for a single first time violation, it has had little deterrent effect because of the sheer number of participants. The usual fine in North Vancouver court is $25 per crab involved in a violation.

On the commercial side, there are about 60 crab fishermen working in the district. Lines are run with up to 450 traps. These fishermen fish in Indian Arm, Upper Burrard Inlet, English Bay, off the mouth of the Fraser River from Pt. Grey to Tsawwassen and throughout Boundary Bay. The annual catch has averaged about 600,000 lbs. The price range for crabs is from 50¢ to $1 per pound. This would give an average gross earning to each fishermen of $5,000 annually. It is not possible for 60 fishermen to subsist on these earnings, which indicates that they fish other species or only partake in the fishery on a casual basis.

The crabs supply the markets and restaurants in the area and are also processed whole, frozen and canned for the export markets. Fresh crabs are also shipped live by air to an expanding world market.

There has been a considerable increase in the last ten years in the number of

Crabs...

fishermen that take crabs. For example, in Boundary Bay in 1970 there were eight fishermen; in 1980 the number increased to 25. All of these competed in a totally enclosed area for a limited resource. This trend is similar in other areas within the district.

In 1981, recommendations will be presented to try and improve crab management, since fishermen are competing for an increased share of a limited resource. Already it has been noted that we are fishing an age class of crab above the legal size limit. That is to say, nearly all the crab landed are from 6 1/2" to 7".

In Boundary Bay very few crabs caught reach 6 1/2", even in crab traps left out up to three or four days. A check in about 15 traps in Boundary Bay resulted in a count of only eight crabs that were either just 6 1/2" or slightly over and the remainder were all undersized. Some traps had as many as 15 crabs, all of which were less than 6 1/2". This indicated that few crabs in this area are left to grow beyond the legal size-limit.

Because of the pressure on the crab resource in this District, we are reviewing an increased number of complaints of theft from commercial traps and, in some cases, theft of whole traps. These complaints have increased in direct proportion to the increase in the number of fishermen.

The department may have to consider a licence limitation on crab fishermen similar to those invoked for other pressured fisheries. Another possibility would be to increase licence fees to an amount that would eliminate all but the serious fishermen. Limitation of the number of traps is also required.

Possibly, thought should be given to raising the miminum landings on a licence each year. The present minimum of $500 could hardly be considered a minimum gross income for a commercial fisherman. There will always be fishermen who fish and report this minimum for any number of reasons, one of which is to maintain a licence category, possibly for capital gain.

Wayne Lowden,
Fishery Officer,
New Westminster

Public involvement a busy affair

The activity of public involvement is supposed to slow down in the winter. This year though, floods and almost continuous rain have kept us busier than in the summer months.

Of the 50 projects operated in 1980/81 in the Lower Mainland, twenty were incubation boxes. Water intakes damaged by high water and the occasional freeze-up have kept us hopping this year. Most of the boxes were planted to only half capacity or less to utilize the first season as an operating test. This decision in itself has minimized the flood damages that could have occurred. Since dividing the New Westminster district into the three areas last June, the projects have tripled in number and the demand for community advisors isn't slowing down.

The enhancement projects are becoming complex and larger, with much more planning and forethought being given to them. The information exchange with the public seems to have taken off. Our phones are ringing right off the hooks and it goes right on till midnight at our homes. There just seems to be no end to the public's desire to assist in salmonid enhancement.

What some Fisheries staff referred to jokingly as the "Mickey Mouse Division," has therefore done a lot to meet the needs of the program. More importantly, we are meeting the needs of the public to be involved with their resource.

Joe Kambeitz,
SEP Community Advisor,
New Westminster

District presents habitat concerns

Natural habitat is threatened by human activity at all levels: residential, industrial or recreational. In the New Westminster district, the combined intensity of all human activities makes habitat protection an immense task.

"The fundamental feature of the area is that it encompasses all of the Fraser River estuary and Burrard Inlet," says Mike Nassichuk, chief of Habitat Protection's Water Quality Unit. "The maintenance of water quality in these areas is essential to the health of all marine inhabitants."

Yet the Fraser bears the heaviest effluent load of any river in the province. A few of the Water Quality Unit's current concerns in the district are: the effects of the Iona and Annacis Island sewage treatment plants, the effluent of mills in the area, the recent expansion of petrochemical facilities on Burrard Inlet, the use of pesticides by Lower Mainland farmers and homeowners, and the effect of heavy metals contained in storm drain effluent.

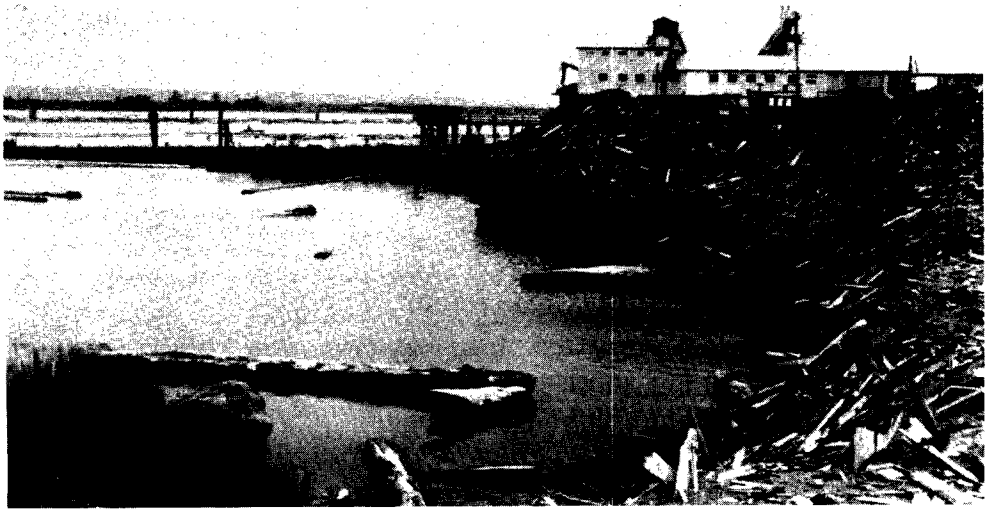
The Land Use Unit of the Habitat Protection Division deals with problems of a similar magnitude.

"Urban development is a major problem," says Habitat Biologist Steve Macfarlane. "It's very serious, particularly with small streams. We try to review all land use proposals."

Fortunately, Steve says, most municipalities in the region are cooperative when habitat considerations come into conflict with development. The unit examines about 250 subdivision proposals each year in an attempt to become involved with habitat maintenance at the earliest stages of development.

In spite of the large proportion of the district that is urbanized, forest harvesting still takes place in many areas. Here too, notes Habitat Biologist Mike Flynn, there is good rapport, in this case between the Department and the forest industry. However, the industry is often faced with limited options, particularly in the case of log storage. Road construction in the forest industry has a significant impact on the habitat, although an increase in the use of helicopter logging methods has eased this slightly. One important development is the Fraser River Debris Control Plan, a long-overdue scheme to clean up logging debris on the Fraser.

Dredging has long been a damaging practice common to the lower Fraser and Burrard Inlet. Through the development of guidelines, Habitat Protection has managed to minimize the loss of salmon fry caused by suction dredges. Another concern, says Habitat Biologist John Mathers, is the repair of dykes damaged by the 1980 winter floods. Habitat wants to ensure that repairs do as little damage as possible to fish eggs and that, if possible, the dykes are developed to better accommodate salmonids.



Mill site near Delta: forest industry is often faced with limited options.

Conflict means work

Fish habitat and habitat protection represent the single most time-consuming part of all the duties of fishery officers in the district. Each year, more than 1,000 letters or requests, all requiring response, are received at this office. An additional one to two thousand referrals are received about information that has been acted on by another agency or group within the Department. These additional referrals may not need immediate and direct involvement by our officers, but do require monitoring.

An increasingly adverse demand on fish habitat is generated by a growing industrial, urban, suburban, rural-agricultural area of 1.3 million people in Greater Vancouver and the Lower Mainland. Urban development has either strangled or is slowly strangling a great number of streams in this district.

The industrial effects are mostly concerned with the area along the banks of the Fraser River and Vancouver harbour.

Controversy over the fate of the Fraser estuary illustrates diverse demands placed on fish habitat in the region.

The administration of habitat problems becomes snowed under in paperwork because of the seemingly infinite number of parallel or overlapping agencies that share concern about development as it affects habitat. It this is cumbersome to our office, it must border on hopeless to any proponent.

It is because of this that some of the smaller works may go unreported and undetected. The cumulative effect of these small works is quite serious. At other times the sheer frustration of a person trying to gain a reply to his questions and waiting through the seemingly endless delays may prompt him to carry on without waiting and getting all approvals necessary from the numerous agencies involved.

Logging is relatively unimportant in this district, compared with other sections. However, this area of the province was the first to be logged, and some of the effects of early logging are still quite apparent. Other areas that haven't been otherwise developed have recovered to some extent.

There is little mining in the district. However, as the price of precious metals becomes attractive, there is renewed interest in placer mining. This has recently developed along the Fraser River and its tributaries, especially in the canyon area. One type of mining that causes major concern and problems is gravel mining. Building construction, highway construction and recently, railway construction such as the twinning of the rail lines to the east, will increase the demand on easily accessible river bed gravel. This will be a major concern in the coming years.

Wayne Lowden,
Fishery Officer,
New Westminster

Steveston reports

The Steveston sub-district, situated in the lower southeast corner of the Strait of Georgia, is manned by two fishery officers and two patrol vessels, "FPV Stuart Post" and "FPL Star Rock". The staff are kept busy year-round.

Responsibilities include commercial, native and sport fisheries of the Lower Fraser River and the Gulf. The area also has more than its share of industrial and urban development, consequently causing habitat concerns.

Lately, increased restrictions on the commercial and sport salmon fisheries have forced fishermen towards other areas, for example, increased effort in the shrimp and crab fisheries off Roberts and Sturgeon Banks. Eventually, these catch transitions will call for still further restrictions, such as: extending the proposed commercial crab fishing closure from one month to three months. Furthermore, with the Lower Fraser River being closed this year to commercial salmon fishing until the International Pacific Salmon Fisheries Commission assumes control, the efforts of poachers will be well rewarded, unless there is an allocation for increased manpower. Considerable effort will have to be put into enforcing the new sport restrictions and licencing.

The Point Roberts U.S. commercial salmon fishery is probably our most frustrating enforcement problem for two reasons:

1. Geographically the area is an extremely difficult one to patrol

2. It is a high-risk enforcement area due to the night work involved on an international boundary.

The Musqueam Indian Band food fishery in Canoe Pass is another focal point for Steveston Fisheries personnel. This controversial fishery has almost led to physical violence between the area's commercial fishermen and the Indians. Increased monitoring of the food fishery for statistical data and alleged illegal selling practices further illustrate the responsibilities of overtaxed local officers.

Ever increasing industrial and urban development on all three arms of the lower Fraser River are creating numerous habitat referrals that require site inspections and comments by the local officer in charge.

During these controversial times, the local fishery officer, more than ever before, must display tact, initiative and good judgement when carrying out his or her daily duties.

John Lewis and Carl Kennedy
Fishery Officers
Steveston Subdistrict

With a story or two to tell, former Kamloops District Supervisor Les Goodman talks with friends at recent retirement party. New Westminster District Supervisor Grant Scott will be transferring to Kamloops to fill the job.

Vessel Masters gather

Fire and water safety highlight meeting

The Empress Hotel in Victoria was once again the venue for the Ship Division 1980 Vessel Masters' Meeting which was opened by Captain B.G. Irving, chief, Ship Division.

The theme for this year's meeting was three-fold: safety, survival and improvements to our administration.

We, the cogs, were firmly put in our place by the big wheel, namely, Bob Smith, our director, who started off the proceedings with an explanation of the departmental organization chart; this writer was somewhat surprised to count only seven people between himself and the Prime Minister! If only life were that simple! Tinker Young had his day and kept everyone amused with his usual lively repartee during his presentation on the recent and forthcoming changes to the acts and regulations.

The Masters were quite literally "shocked" into a greater awareness of the dangers of fire at sea by one "Smokey" Batzer, a marine firefighting expert, whose day-long, no holds barred, no punches pulled, firefighting seminar kept everyone on their toes and involved in the action. This event, I have no doubt, will have its desired effect in improving our shipboard fire prevention and training techniques.

C.F.B. Naden was the scene of the in-pool demonstration on the use of life rafts and survival suits, the equipment being supplied by C.W. Lucas Ltd. and the shipwrecked mariners by the courtesy of your Ship Division. Hank Veelbehr, master of the "Temple Rock," was reported to have found the waters of Naden Pool substantially warmer than those of South Bentinck Arm and said he'll be back next year. All the "survivors" agreed that the less time spent bobbing around in a life raft, the better, the motion being extremely violent.

It is said that the biggest problem of survival in a raft is the rapid demoralization of the occupants due to the incessant motion.

Survival lessons at CFB Naden (top), Brian Murray presents Jack Gosse with "paper award" (middle) and Tony Preston receives 25-year service award.

"Cold But Not Dead" was the title of Dr. John Hayward's lecture and slide show on survival in cold water. Dr. Hayward of the University of Victoria is one of the leading authorities on this subject. It is of interest to note that over two hundred invitations to this lecture were sent out to the fishing industry; regrettably, not one fisherman took the time to attend what was an interesting talk on a vital subject. Members of the Coast Guard and the Rescue Co-ordination Centre attended this and the firefighting seminar.

Captain Ian Sacre, senior advisor, Fleet Support, Ship Branch, Ottawa, took over the spotlight on Thursday afternoon for an informative talk on the new Departmental fleet instructions and guidelines, and gladdened the hearts of all with the news that the days of the "Ho Chi Minh" uniform are coming to an end and the new khaki uniforms would be ready for issue this summer.

Charlie Warburton and his cohorts displayed some of the new radio equipment that is, hopefully, to be installed aboard the patrol vessels. As well, Charlie issued a plea for clear reporting of any faults that occur.

Appraisals, the perils of personnel problems and their fair and proper handling were ably explained by Jim Giffin and Fred Iviney (Hecate Star recipient). Special thanks to Alison Jamieson who braved the firing line to explain the reasons behind some of our paycheque delays.

The 1980 joint-venture hake fishery and the 1981 and '82 offshore prospects were explained by Barry Ackerman, Offshore Division.

Vada Souliere, administration officer, Ship Division, rebuked us for our shoddy paperwork, and then, to solve everything, resorted to that old governmental trick and handed out a few more forms for us to fill out! Thanks a lot, Vada!

During the course of the week, Captain Jack Gosse and his crew of the "FPV Laurier" were presented with merit awards for their valiant efforts in the rescue of the crew of the troller "Daleson" in Pachena Bay. Jack also has the dubious distinction of becoming the first recipient of the Ship Division's "Paper Award", which is to be presented annually to the one who has caused the most paper work. Captain Tony Preston (Red Crew, "Tanu") was also presented with his 25-year service award.

The meeting again provided us all with the opportunity to meet the voice on the other radio and to shake the hand that waved from the wheelhouse door across a half mile of ocean. For that, and the knowledge gained that could one day save a life, this was an invaluable week.

A resounding expression of thanks was given to the organizer of the meeting, Captain Jack Gosse, whose efforts and ideas made it all possible, and to chairperson Lyle Freeman, who kept everything running smoothly and to schedule.

To the cries of "see you in the herring season" the meeting closed and we went our separate ways. The hotel staff heaved a sigh of relief and all was quiet -- but only until the Field Services onslaught in December!

Captain Roger Myerscough,
Headquarters Relief Master

"The meeting again provided us all with an opportunity to meet the voice on the other radio and to shake the hand that waved from the wheelhouse door across half a mile of ocean."

Habitat Program reviewed

The Habitat Management Revitalization Committee is preparing a progress report after several months of internal and external discussions of the Department's habitat program and how it should cope with increasing pressure on fish habitat.

Exactly what the report is to recommend will not be known until after it is presented to the Deputy Minister, but some changes in the habitat program are necessary says Howard Smith, senior advisor to the assistant deputy minister, Pacific Region.

"It is clear that we are facing an increasing human population and greater competition for water resources. This is making it tougher to hold the line against habitat degradation or loss. But if the habitat goes the resource goes."

The Habitat Revitalization Committee was set up last August following a recommendation by Assistant Deputy Minister Doug Johnson to Deputy Minister Don Tansley, that the Department should undertake a major review of the habitat function throughout the country. Howard Smith and Dr. Cam Macleod, Ottawa director of Fish Habitat Management, were assigned the task of examining the situation on the west coast, where the review began. They first met with habitat managers to establish a basis for their investigation and to prepare for meetings with public interest groups. Following this they met with over 30 groups representing resource and habitat concerns in both B.C. and the Yukon Territory.

"The purpose of the meetings," Howard says, "was to say 'here's how we're put together; here are the things we are doing in the different units responsible for habitat management work in this region. We would like to hear from you what you think the shortcomings are."

The group gathered information in four categories: policy, programs, organization and communication. As an initial step toward revitalizing the program, the group organized a committee composed of four members representing the protection, enforcement, research and enhancement functions (Tom Bird, Grant Scott, Ian Birtwell and John McNally respectively).

"The committee has two purposes. First, it will provide a better focus and ongoing coordination for all habitat activities. Second, it will provide support during revitalization exercises and assist us in putting our recommendations together."

"We want to be able to step back from current problems and issues, to get a better understanding of the situation."

The Committee hopes to have its progress report prepared in the next few weeks and to complete a final report in about nine months.

Mike Youds,
Editor

Radio systems studied for improvement

An improved Department radio system is on the list of competing priorities being considered for capital allocation in 1981 and 1982.

Technical Services Chief Peter Ryan says there are encouraging signs that the need for an improved system is being recognized. Acting Director of Field Services Don Wilson has established the improvement of radio communications as one of his priorities. The final decision is up to the Regional Execuitve Committee.

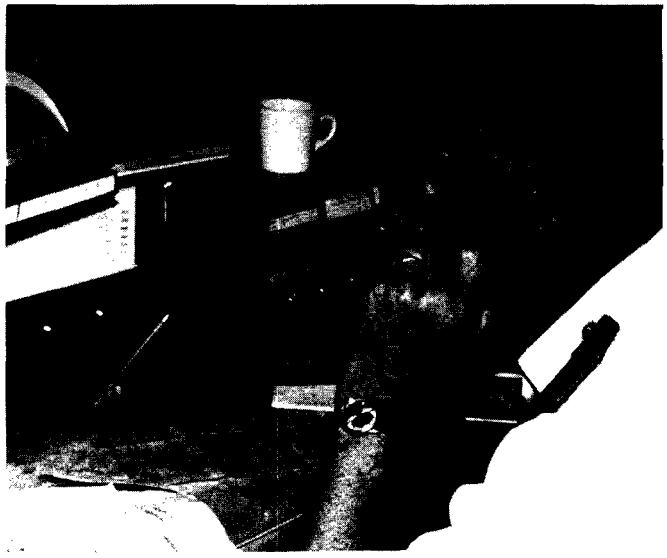
A report on the state of the system in the Queen Charlotte Islands, where proper radio communications are essential, appeared in the December, 1980 issue of *Sounder*. In the

article, Queen Charlotte District Supervisor Kip Slater told of how the "Arrow Post" was at that time patrolling a herring fishery and could not provide catch statistics because her radio was inoperable.

But Peter is optimistic about improvements if "resources are made available. Fortunately, tube radios are on the way out," he says. "Ship Division has already purchased six of the first new solid state radios that are now standard equipment for small vessels, for guardians and as secondary transceivers on patrol boats."

The battery-operated radios for guardians will cost less than $3,000 each and will operate on all Department frequencies. Replacing the major land station radios, such as the Queen Charlotte post, will cost considerably more, Peter says. The land station transceivers have to be capable of handling future data transmission needs, voice privacy and clear transmission.

Very High Frequency (VHF) is the preferred communication mode, with repeaters that would enable large areas to be within range, providing the topography is well suited. VHF also would permit communication without interruption from other districts.



Captain Tony Preston and radiophone.

Bulletin EOW self-help study available

Departmental Equal Opportunities for Women coordinators who make up the Interdepartmental EOW Committee have gathered information and compiled a loose-leaf book which briefly outlines the functions of departments in the Lower Mainland and the means of entry to positions in the region. The book also lists individuals from these departments who would be able to supply more detailed information about the positions and about specific competitions. The study was intended to help develop a women's self-help network.

From this information-gathering study, the committee should be able to see some patterns emerging, draw some conclusions about barriers to advancement and get an overview of the opportunities in the region. The committee will prepare a report outlining the findings of the study. This report could be circulated to managers for their comments, and could be referred to our newly-appointed, regional, member-at-large in Ottawa, Manon Pelletier. Manon sits on the EOW steering committee in Ottawa and would be able to channel our findings through to it.

All departmental employees are welcome to look through our copy of the *Information Gathering Study* at the Personnel Services office, 1112 West Pender Street in Vancouver.

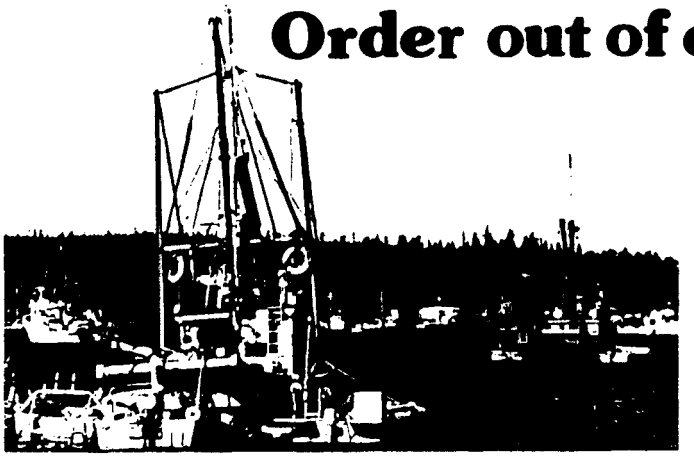
Hilary Schwenk
Staff Training Officer
Personnel Division

Photos wanted

SEP and Field Services Annual Report submissions are coming in thick and fast. Thanks for such a quick response, but... where are some photos with which to illustrate them? Prints (preferred, but slides are okay) depicting the following activities are especially needed: commercial, native and sport fisheries, DFO staff at work and fish pictures.

Please help tell the Fisheries story for 1980 by sending photos to: Maxine Glover, 9th floor, 1090 West Pender.

Order out of chaos



Salmonid writer Terry VanderSar recently visited the grounds of the 1981 herring roe fishery and returned with this story.

In Lambert Channel between Denman and Hornby Islands, several hundred trollers and gillnetters, herring skiffs in tow, pace back and forth like hungry predators. On the bridge of the "FPV Howay," sonar tracings confirm that larger schools of herring remain offshore in deeper waters.

At ten a.m. on Wednesday, March 4, the herring roe fishery in the Gulf opens to 34 large seine boats. These vessels fish deeper waters with nets drawn close like a purse around schooling fish. In just one set, a seiner may net 300 tons of herring with an estimated market value of $800 a ton. The roe herring fishery is very lucrative, and the smaller, more numerous gillnetters grow impatient for their share of the catch.

At almost any moment several million mature herring could suddenly advance into the shallows to begin spawning along the shoreline of Denman Island. They produce millions of small, transparent eggs that are glued to algae, kelp and eelgrass growing in and just below the intertidal zone. These are traditional spawning grounds, perhaps dating back thousands of years.

By late afternoon, the gillnetters are in position, crowded along the beach of Longbeak Point, ready to set curtains of nylon to intercept the silver-colored tide. The seine fishery will close at 5:30 p.m. and the gillnet fishery will open at precisely 6:00 p.m. Test fishing has shown the female herring are ripe for spawning, with the eggs accounting for up to 30 percent of their body weight.

Early next morning, the first radio reports trickle in to announce that spawning is in progress along Longbeak Point. I join Fishery Officer Lawrence Chambers, in a light aircraft for a gear count on the spawning grounds.

The blue-green waters lining the shore are milky with the milt released by thousands of male fish. Fishermen in aluminum skiffs shake silver herring from gillnets hauled in over the beater bar and then reset their nets over the opposite side of their skiffs. Their catch of the larger females fetches $800 to $1100 a ton in the roe fishery since the majority of smaller male fish escaped through the barrier of nets.

Among the spawning schools of herring flashing silver in the sunlight, sleek sea lions and mottled gray harbour seals feed leisurely on the bounty. Schools of dogfish circle in the shallows to take advantage of the easy prey. Also attracted to the feast are thousands of seabirds. Black cormorants, murres, pigeon guillemots, and heavy-billed puffins pursued the silver schools underwater. Diving ducks and a sprinkling of black brant feed on the herring roe glued to algae and eelgrass. Scores of gulls settle on the milky waters to feed on loose clusters of herring eggs, while flocks of shorebirds await the slack tide to eat their fill of roe.

After spawning is completed, the spent herring return to school in deeper water, and then migrate to rich feeding areas outside the Strait of Georgia. Most predators are satiated, and gillnetters have caught their allotted quota of some 7,000 tons of fish. Only the birds remain behind to exploit the heavy

spawn exposed at low tide.

"It's been a storybook fishery, with the weather just perfect," says Fishery Officer Jack Broome.

He's right. This year's roe herring fishery has little in common with similar fisheries of several years ago, when high prices paid for roe by Japanese interests gave the fishery a goldrush atmosphere. Boats capsized after netting more herring than they could hold; many fishermen drowned; small fortunes were made and lost overnight.

Terry VanderSar
Writer and Photographer
Salmonid Newsletter

Letters

Contributions overlooked

Dear Editor,

For some reason the recent article dealing with research activities at the Fraser estuary neglected to mention the collaboration of colleagues in Habitat Protection, FSB. The work on the foreshore would be impossible without this assistance. Acknowledgements are particularly due to Bruce Hillaby, Barry Lawley, Kevin Conlin, Pam Futer, Karen Hutton, Bob MacIndoe and Bill Field.

Sincerely,
Colin Levings,
Research Scientist,
Pacific Environmental Institute

A special thanks

To all Fisheries staff:

Our thanks to all of you for your generous gift of money which was presented at the regional meeting, and a special thanks to Gordie Zealand for all his efforts. It was a most unexpected and heartwarming surprise, and it made us feel that we were not alone in our misfortune.

Things are slowly getting back to normal. Ironically, we had a smoke detector with our possessions aboard the van, and to this day, are wondering whether it worked or not!

Your gift was greatly appreciated; a kindness such as this is never forgotten.

Marion, Larry and Glen Ottman,
Prince George, B.C.

Spurious emissions

Fishery officer moves include Chris Curtis from Offshore to Qualicum, Doug Smith from Offshore to Coquitlam and Dean Miller from Rivers Inlet to Tofino, Dennis Burnip from Coquitlam to Surrey and Pat Harvey from Prince Rupert to Williams Lake.

* *

Kevin Smiley, fishery officer, Tofino leaves the Department in March to join the Environmental Protection Service in Alberta; Sally Hutchison has resigned from the Investigations Unit; Grant Scott, Supervisor, New Westminster is transferring to Kamloops as Supervisor in that District.

Joining Licencing on a one year secondment is Dick Carson, Supervisor, Southern Inspection District.

* *

Lonnie Hindle has left Field Services Branch for Ottawa where he joins Canada Employment and Immigration as Director, Native Employment Program.

* *

Leaving SEP is Jackie Watt, Division Coordinator, Special Projects, to join Department of Supply and Services' Canada Information Agency.

* *

Gary Norberg won the recent competition for A/Director, Personnel Branch for a two-year term.

more Spurious...

Lee Williams, on a recent holiday in Hawaii, met Barb and Bob Morgan (they are spending four months there), who sent good wishes to all their Fisheries friends; she also met the George McIndoe's who were enjoying the sunshine.

* *

New secretary for the Fraser River Northern B.C. and Yukon Division is Susan Raju.

* *

Out of retirement is Ken Jackson, who has been contracted to work on the quality of frozen herring in the round being produced from some experimental herring impoundments for export to Japan.

* *

Leaving the Department is Jim Stewart, draftsperson, SEP-Engineering; Jim has moved to Victoria.

* *

SEP recently received good press in the magazine *Nature Canada*, published quarterly by the Canadian Nature Federation. The writer of the 14-page article on Pacific salmon is Philip Dearden, a geographer at UBC.

* *

Born to Lenore and Robert Martinolich, Bella Bella fishery officer, their second child, Katie Leigh. Katie was born at 2:23 pm on February 28 in Bella Bella. She weighed 5 lbs. 8 oz.

Promoted to stock enhancement officer in charge of Bella Coola Hatchery is Hans Galesloot.

* *

Joining South Coast Management Biology Unit is Alvin Sewid, biological technician, who has left Habitat Protection Unit, and a newcomer Tom Shardlow, management biologist formerly with ESI Enviroscience.

* *

Brenda Donas is leaving SEP Operations Assessment to work at the Birkenhead Pilot Hatchery; Dale Fetzner has left Fulton also to work at Birkenhead.

* *

Brian Mitchell has left Fraser River Management Biology Unit to work with SEP at Blaney-Inches Creek facilities.

* *

Joining the Salmon Services Division, Vancouver, is Vic Palermo, mark recovery biologist, who comes from the Institute of Animal Resources, University of British Columbia. He replaces Keith Simpson.

* *

Joining SEP as Executive Assistant to the Executive Director is Lois Hooge, formerly with Canada Employment and Immigration Commission.

Curly, Moe and Larry, pioneers in the field of nose tagging and head recovery. Larry was quite sure he marked the subject's nose. The head was later recovered from the bushes across the river. Vic Palermo of the Head Recovery Branch was kind enough to lend the photograph Is there anything you would like to contribute to Sounder? Deadline for the next issue is April 15.

SOUNDER

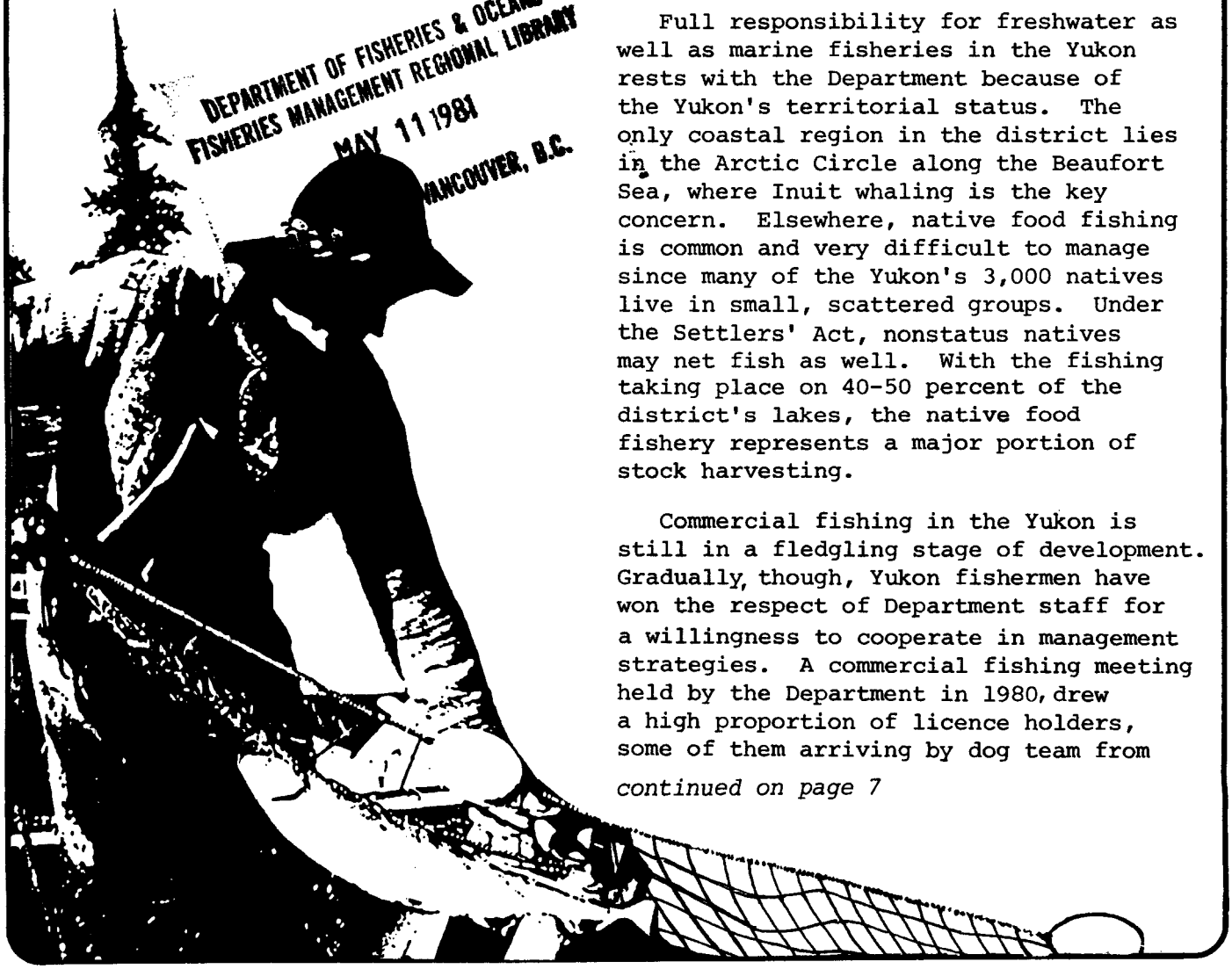
Newsletter of the Department of Fisheries and Oceans, Pacific Region

Volume IX Number 3 April-May 1981

The north: an uncertain frontier

The Whitehorse district is the subject of this second in a series of district reports covering the Pacific Region.

No other district in the Pacific Region of the Department of Fisheries and Oceans is as vast and rugged as the Whitehorse District--an area of 770,000 km^2 covered by District Supervisor Gord Zealand, four fishery officers and 5 or 6 seasonal patrolmen.



Much of the territory is mountainous and contains countless lakes and rivers, most of which are inaccessible by road. Fishing, because of the Yukon's sparse population, is not the intensive industry it is in southern regions, but the frontier atmosphere of the Yukon is deceiving. Fishery management, stock management and habitat destruction take on a distinctive meaning in the north, and place the Whitehorse District in a category all its own.

Full responsibility for freshwater as well as marine fisheries in the Yukon rests with the Department because of the Yukon's territorial status. The only coastal region in the district lies in the Arctic Circle along the Beaufort Sea, where Inuit whaling is the key concern. Elsewhere, native food fishing is common and very difficult to manage since many of the Yukon's 3,000 natives live in small, scattered groups. Under the Settlers' Act, nonstatus natives may net fish as well. With the fishing taking place on 40-50 percent of the district's lakes, the native food fishery represents a major portion of stock harvesting.

Commercial fishing in the Yukon is still in a fledgling stage of development. Gradually, though, Yukon fishermen have won the respect of Department staff for a willingness to cooperate in management strategies. A commercial fishing meeting held by the Department in 1980, drew a high proportion of licence holders, some of them arriving by dog team from

continued on page 7

Guest editorial Call of the angler

Tourism and sport fishing may need a bigger piece of the salmon pie.

That old bugaboo of fisheries managers' allocation looms larger than ever, not only among types of fishing gear but in the commercial versus Indian food fishery, and sport versus both commercial *and* food fishery. As well, there are conflicts within each of the three major sectors for what are perceived to be prior claims to either the salmon resource or even certain species of salmon. It is in the latter bracket, sport fishing, that one allocation priority is suggested more and more. That is, to reserve wherever, however, and as soon as possible the bulk of the chinook and coho stocks for recreational exploitation.

The perceived logic in support of this pro-sport, pro-tourist claim is very simple. The commerce generated in the process of taking a pound of salmon, or any one salmon, by anglers and tourists is many times that generated by commercial fishing. All the fish taken either way end up as food. Since sport and tourist fishing is increasing and has great potential to continue doing so, it seems advisable, wherever possible, and without unduly displacing individual fishermen or businesses, to allocate *all* chinook and coho salmon stocks to such sport fisheries. Chinook, and coho, in total make up 15 to 20 percent of total Canadian salmon stocks from the Pacific, depending upon which year's statistics you use.

Sport fishing gear is notably inefficient, so it would be difficult for that gear to catch the permissible annual crop, which happens to be between five and six million coho and chinook. Of those, the anglers currently take only about 16 or perhaps as much as 20 percent. (Some of the figures used here are three or four years old, and sport fishing is proliferating.)

At the moment there is great concern for the stock of non-hatchery or "wild" chinooks and for the wild coho stocks. To safeguard escapement, all users of those two resources are being asked to contribute to escapement on the spawning grounds (to maintain a safe backlog of wild stock) by cutting back on their catch. Particularly in respect to chinooks, it appears to be an emergency. So, while tourism and charter boat interests may be contesting the methods used to conserve chinooks, they don't contest the need.

All that aside, there seems clear logic in moving as rapidly as possible to eradicate non-sport pressures on chinook and coho stocks. Even if it were possible to give those stocks entirely to sport and tourism, the established, but admittedly archaic commercial fishery still would be left with 80 percent of the total salmon haul.

Some suggestions to that end are:

Issue no more new salmon troll licences That is, retire them by attrition. That can be started as soon as possible, using compassion and financial compensation, and

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by moving the troll fishery right out of inshore waters, including the major straits.

This editorial could be closed by the remark, "It's just a thought, fellows." But it's more than just a thought, it's logical and overdue. With proper qualification and explanation, it need not present the sociopolitical impasse that many politicians seem to fear. Let's move on it before it's too late.

Lee Straight
Sport Fishery Advisor
Field Services Branch

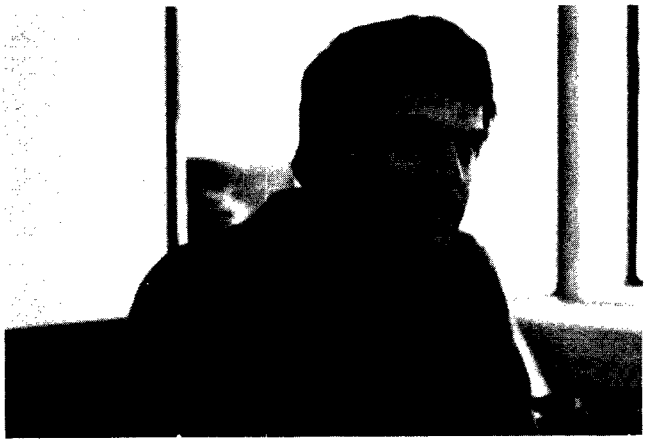
Staff are invited to respond to this story. We will print a compendium of responses in the June issue.

The Habitat Management function

An interview with Habitat Management's Tom Bird

This is the first in a series of four interviews to be conducted with Department staff in the Habitat Program (now known as the Habitat Management Program). As a result of an internal review program, Habitat Protection will be undergoing fundamental changes in the near future. This first interview, with Program Administrator of Planning and Coordination, Tom Bird, introduces the program. In future Sounders, *the three Unit chiefs will discuss individual issues.*

Since this is an introductory interview, we might first start with a description of the program's organization.



Habitat Management Administrator Tom Bird: no more hardships, the fish can hardly make it on their own.

The Habitat Management Division is in the Field Services Branch. It's a division made up of 42 person-years, to be exact, and is broken down into three basic operational units. One unit is Water Use, headed by Rod Bell-Irving. The Water Use Unit examines problems of water use; mainly things like hydro water diversion projects for irrigation, estuaries and marinas--any activities that affect water. The second unit is Land Use, headed by John Payne. This division is concerned with land-based activities that may affect fish habitat--agriculture, forestry, roads and railways. The third unit, Water Quality, looks at the chemical constituents of water with respect to sewage pulp mills, heavy metals and that kind of thing. Mike Nassachuk is in charge of the Water Quality Unit.

We have, of course, other functions with respect to management and operational activities, such as symposiums for field officers and information bulletins. We have a very close liaison with the Habitat Research Division, part of the Resource Services Branch. Essentially, Habitat Protection is made up of technical people--engineers, biologists, biological technicians and engineering technicians, and a forest hydrologist. We also have access, through a secondment process, to Bill Masse and Mary Hobbs, both Department economists who devote a certain amount of their time to habitat issues. That's the basic structure of the unit. We also provide a service that looks at major habitat impacts according to their relation to fisheries resources.

Needless to say we have very close relationships with other federal and provincial agencies. A lot of this occurs through what is known as our referral system, which is simply a system of information which results in action. With respect to the Environmental Protection Service (EPS), we relate very closely to them. They form the contact between us and the Province on pollution issues and the Pollution

Habitat...

Control Board of the Province. They serve as our referral point to the Province, although in many instances we deal with the Province as well. As well, the EPS is given a mandate for certain sections (Section 33-2) of the Fisheries Act, under the present organizational structure.

"It is absolutely essential that we become more closely aligned with the provincial government."

Their responsibility deals with issuing pollution control permits. The item is referred to us by EPS. We supply the information and refer it back to EPS and provide the federal response to the provincial government. This process has been under review for some time. The habitat unit has probably been closer to the provincial scene than any other unit within the Department. If we are to be effective in any way, it is absolutely essential that we become more closely aligned with the Province.

There are some very positive planning initiatives now being taken by the Province. The Planning Act will result in a major thrust on resource planning throughout the province and it's essential that we become part of that process. In order to do that,we will have to come to some arrangements with the various provincial agencies to introduce mechanisms that ensure Department input into these planning activities. At the present time, that process is working well informally. There are all kinds of interactions going on a day-to-day basis, but formal planning with the provincial government is limited.

There is quite a bit of debate about what is contributing most to the decline of major species. Some insist it is habitat degradation, others say it is overfishing. What do you see as being the most responsible for the decline?

We're not in a position to identify what has been lost in terms of percentages. Habitat degradation has obviously contributed to declines. When you take the Fraser River for example, and look at it in a synergistic manner, there is no doubt that habitat losses are contributing to stock losses. What we're looking at is a combination of events--everything from overfishing to near-shore and offshore mortalities and problems that we don't understand. This is one of our key points when we're talking about habitat management: good God, there's enough problems under natural conditions. Let us not impose any more hardships on the stocks. The fish can hardly make it on their own, never mind with sewage, pulp mills, urban development, logging, overfishing and everything else thrown in. The composite effect of all the development of the Fraser downstream from Prince George--agriculture, pesticides, urban development log storage, chemicals, logging--you name it, is obviously going to have an impact on a portion of the stock. The bottom line is when you combine some loss of stock through natural causes, some through overfishing and mismanagement and some loss of stock through direct habitat degradation, you will get the problem we're faced with today.

But will there always be a conflict? Are people willing to pay the price of a complete cleanup? Where do you establish a compromise?

Well that's the $64 question. Basically, what people in Habitat are concerned about is the lack of public concern. Let's face it, if enough people become concerned,then the bureaucratic machinery will respond. For instance, look at sewage treatment in the Vancouver area. If you look at other river systems like the Thames or the Rhine Rivers, they have degraded over the years to a level at which they cannot support fish. They now have realized that they can't have it this way.

"People in Habitat are concerned about the lack of public concern."

They've spent hundreds of millions of dollars on cleanup efforts so that now, if a salmon happens to enter the Thames, it may survive. British Columbia is really no different. Provincial, and to a lesser extent federal officials, will say that the Fraser is in pretty good shape. There are some problem areas. Fisheries

people are much more concerned and will suggest that the situation on the Fraser needs attention now before it becomes extremely critical. I'm talking specifically about sewage and waste discharge.

What are the greatest barriers to doing your job?

I think the biggest barrier is simply the lack of resources. There's no point in kidding ourselves. There are a tremendous number of problems out there. I've been around for a dozen years and comparatively speaking, the province is one of the highest growth areas in Canada. There are so many habitat problems throughout the province, ranging from coal transportation on the coast to a lack of water in the interior of British Columbia, and everything in between. We simply have not got the staff required to handle the issues adequately. That doesn't make us any different from a lot of other divisions. Virtually every other resource agency in the world has the same problem. Certainly the resource agencies have had a tough sledding when it comes to enough person-years and enough dollars to do what they consider to be an adequate job. I think it's more complex with fisheries because of the complexity of the job. We don't have all the data. We don't have the information that may be required for specific projects. Even if we have it, it doesn't give us all the answers. Of course, beyond that barrier, we have to bear in mind that the greatest problem we face is the number of existing and potential impacts that can affect habitat.

Farming fish for food and profit

The Pacific Coast lends itself favorably to salmon aquaculture or pen rearing in that the vast broken shoreline offers protected inlets, nonextreme tides, favorable currents, low turbidity, and is widely utilized by indigenous salmon stocks.

Coho and chinook salmon are favored for fish farming and can be raised to approximately 300 g ground weight in a relatively short period of time. The production of salmon of this small size caters to the restaurant trade rather than the retail market, thereby reducing the direct marketing competition of farmed salmon with other ocean fish products such as commercially-caught salmon and groundfish. The farmed salmon must be promoted as a special commodity so it can compete with the established "pan-size" trout market.

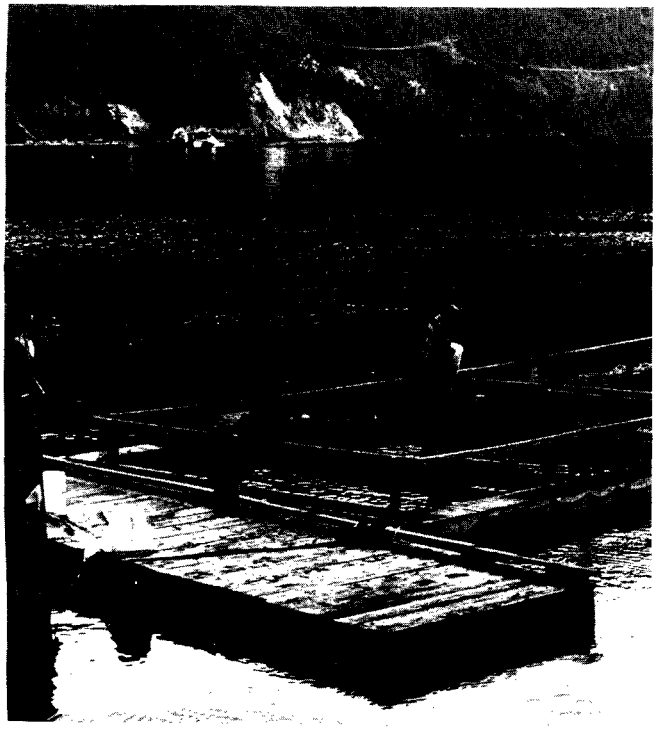
B.C. salmon aquaculture technology is some what limited because the basic concept is relatively new to the region. However, experiments conducted by the Pacific Biological Station and programs initiated in Alaska and Oregon during the past 10 years provide information to the newcomer on both the positive and negative aspects of the industry. Technical queries should be directed to:

Fish Culture Division
Dept. of Fisheries & Oceans
Pacific Biological Station
Nanaimo, B.C.
V9R 5K6

At present, only 14 fish farming permits have been issued in B.C. Of the 14, only three operations reported sales in 1979 for a total annual production of 34.9 t, compared to a wild harvest of 51,700 t.

B.C. commercial mariculture-- total production and sales.

Year	Total production and salmon sales (tons)	Salmon Eggs Purchased	Sold
1975	364	78,000	-
1976	1,364	1,120,000	-
1977	6,905	1,778,000	-
1978	12,897	9,214,000	-
1979	28,499	4,701,500	200,000



Net pens at mouth of Indian River, 20 km northeast of Vancouver. Pens are part of pilot project operated by Special Projects Division to improve coho and chinook sport fishery in Burrard Inlet.

Glossary:

A collection of related terms for the sake of the layman.

Aquaculture- the raising of food organisms in an underwater environment. Aquaculture is not to be confused with aquiculture, which refers to hydroponics.

Mariculture- the raising of food organisms in saltwater.

Ocean ranching- the release of cultured young fish into the ocean for natural rearing; when the fish return as adults they are harvested both by the facility operator at the facility and by fishermen during fisheries.

Fish farming- the pen or pond-rearing of fish until they reach a marketable size.

Pen rearing- a particular method of aquaculture involving the use of net pens for rearing fish in fresh or saltwater.

The major sources of salmon eggs available to aquaculture operators on the coast are Robertson Creek and Big Qualicum hatcheries, both located on Vancouver Island. Eggs are usually purchased green (prior to the eyed stage) but are also available at the eyed stage of development. In addition, live adults may be sold for brood stock purposes to persons holding a valid aquaculture permit.

Increased production trends and salmon-egg demands from years 1975 to 1979 inclusive, are as shown in the table.

Of the various salmon aquaculture ventures presently in operation, Apex Bio-Resources, Ltd. is the largest operation and contributes the most pen-reared salmon to the commercial market. The majority of operations, however, are low profile, restricted in production and expansion through lack of financing and/or expertise. With the ever-growing number of people escaping urban life in favor of independence, isolation, and job satisfaction, an escalation of interest in salmon mariculture and consequent expansion of operations along the coast are inevitable.

At this time, it is Departmental policy to promote salmon aquaculture (pen-rearing) and to offer assistance to those already participating in the industry. "Ocean ranching", on the other hand, is prohibited mainly due to the fact that the fishery stocks are managed as a "common property resource", and to manage otherwise would involve a total revamping of the present management strategy.

Departmental policy regarding salmon aquaculture has taken second place to the propagation and management of wild and hatchery sea-run stocks. However, it is imperative at this point that stringent entry regulatory controls and expanded support research be initiated to accommodate the foreseeable increase in interest and participation in salmon mariculture.

Alf Stefanson
Senior Management Technician
South Coast Division
Nanaimo

An uncertain frontier...

continued from page one

as far as 120 km away. Most commercial fishermen use fishing as a source of supplementary income; they cannot rely solely on a seasonal, often "barebones" fishery. Tim Osler, patrolman on the Yukon River, explains the situation along his route.

"There are about 30 licence holders, but these are spread over 220 km of the Yukon River. It's mainly a gillnet and fish wheel fishery and the profits are not that high. Most of them could get by on $1,000 a year, thcugh--they're living in tents. About a dozen of them are living there all year-round."

The Yukon fishery typifies the kind of problem that is faced by fisheries in remote areas--how to get the fish to market. In the absence of Reverend Dan Meeks, 1981 may prove to be a more difficult year for those 30 fishermen. Reverend Meeks ran an outboard riverboat along the Yukon and purchased commercially-caught fish for shipment from Dawson to Vancouver. In 1980, he sold about 13,600 kg of salmon and worked long days without making a penny for himself. This year, a new processing plant has been constructed in Dawson, but Reverend Meeks has packed it in. Yet the native food and domestic fisheries along the Yukon will continue with measurable success; 1980 was one of the best years ever recorded for the Yukon chinook run.

In spite of the district's small population, habitat loss is more prevalent in the Yukon as a result of nearly a century of placer mining. The high price of gold has led to a resurgence of interest in placer mining. There were more claims staked in 1980 than in 1898, the peak year of the famous Klondike gold rush. Many Yukon streams are lost to the salmon forever because of destructive mining practices in the early days of settlement. Regulations introduced since then have been ineffective because of insufficient data to lay charges against mining operations.

"What you're faced with as a result of placer mining is a total destruction of the stream bottom," fishery officer, Burt Ionson says. "We're working with the Department of Indian and Northern Affairs (DINA) to deal with it, but it's a slow process. DINA feels our rules will inhibit the growth of the Yukon."

There have been several instances where charges have not been laid because the Department must ensure that the particular case chosen must be airtight due to the precedence it would set in the Yukon. When a case is chosen, it will mean taking on the entire community in the Yukon.

Whitehorse staff on a warm March morning, left to right: Jack Jackson, Ed Ramsey, Bert Ionson, Sandy Johnston, John Burdek, Heather Chambers, Dave Milne, Tom Munson, Tim Osler, Carole Laurie, Aileen Harler, Pete Etherton, Pat Milligan.

Whitehorse

Yukon...

The construction of major oil and gas pipelines across the Yukon is the latest threat to fish habitat. Although pipelines have proven less destructive to land habitat than originally feared, they necessitate streambed disturbance in every water course encountered as they thread their way to the industrial south. Pipelines have become symbolic of a new era of growth in the Yukon; an era not altogether welcome in the eyes of many. Expansion of the mining and forest industries will mean a greater loss of fish habitat. An increase in tourism will place a greater strain on the traditional sportfish stocks.

"This season will be the first in three years in which we've had a full complement of officers throughout the district," Bert says. "We're heading into a difficult period, though."

Yukon sport fishery

Report cites declines, sets priorities

Yukon waters provide the sport angler with a unique opportunity to catch lake trout, grayling, northern pike, and arctic char as well as close to a dozen other freshwater species. In addition, three species of salmon--chinook, sockeye, and coho--are intensively sought by the 20,000 resident and visiting sport anglers.

The Yukon sport fishery is undergoing rapid growth with licence sales almost quadrupling in the past two decades. Applications for fly-in fishing operations have also increased dramatically, especially within the last couple of years. However, in spite of obvious increases in fishing pressure, catch information indicates a declining harvest. This is contrary to what one might expect in a frontier area such as the Yukon which, as we all know, has abundant resources and so few people!

Coupled with remarks from long-time Yukon residents emphasizing that fishing is not nearly what it used to be, the declining trend in the catch has raised serious questions about the future of sport fishing in the Yukon.

As a result of these concerns, an assessment of the Yukon sport fishing was undertaken by Paish and Associates to document the status quo and to provide policy guidance for future management decisions. (A summary report of this study is available upon request from the Department office in Whitehorse.)

The responsibility for management of Yukon freshwater fish (as well as salmon) presently belongs to the Department, although the Yukon Territorial Government (YTG) has recently requested that it be transferred to them. Management practices to date have been extremely low-key as a result of monetary limitations and the higher priorities assigned to various salmon stocks in the Territory and in northern B.C. However, this laissez-faire approach is one that cannot be followed for much longer in light of the rapid increase in industrial developments such as tourism, placer mining and hydro. It comes with little surprise then, that the major recommendation from the Paish report states that the Department should "assign a high priority to the management of inland freshwater fish species in the Yukon."

Other recommendations include:

- the development of an active low-yield management strategy based on production capability and harvest parameters
- small to intermediate-sized water bodies along transportation corridors and the destination lakes of commercial fly-in sport fishing operations should receive initial management priority
- education and public involvement pro-

grams are fundamental to any successful management program
- responsibility for freshwater fish management be transferred to the Yukon Territory government within four years.

In the meantime, the Department has the responsibility to design and implement a sport fish management program which will provide a solid foundation for the future of the north's number one recreational pursuit. Besides enhancing the image of the Department in the north, this is a unique opportunity to manage a resource which is still in fairly good shape; it is not yet a situation where the manager has to play the role of repairman while at the same time, play to the miseries of reactive politics. Past experience tells us we should not wait!

Sandy Johnston
Biologist
Whitehorse District

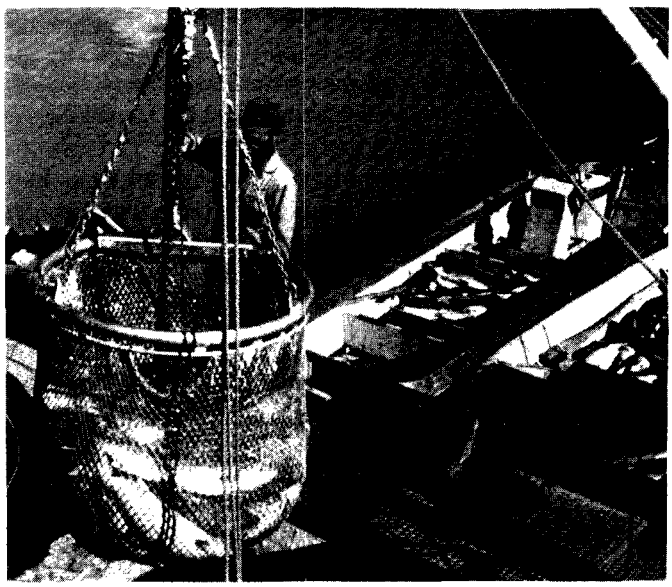
Taku fishery continues despite difficulties

After two years of mixed results, an experimental freshwater commercial salmon fishery on the isolated Taku River will be continued in 1981.

The Taku River is a northern transboundary river (a river that flows from Canada through Alaska to the Pacific) with its mouth near Juneau, Alaska, some 560 km up the coast from Prince Rupert. Until 1979, exploitation of what are largely Canadian stocks in the Taku was carried out almost exclusively by American commercial and sport fishermen. The cost of transporting fish to southern markets was too high to make Canadian fishing an attractive venture.

In 1979, B.C. Packers, facing a year of low coastal production, approached Department staff about supporting a commercial fishery in the Taku (as well as the Stikine, an already existing commercial fishery). In the case of the Taku, the Department agreed to set up a three-year experimental fishery to test the economic feasibility of such a venture. A cross section of 14 fishermen (some with coastal experience, others from the north) were given permits.

During 1979, the fishery had a slow start up. None of the fishermen really knew the river or what fishing methods would prove successful. A lack of patrol resources within our Department necessitated bringing up fishery officers and technicians on a rotating basis from southern areas.



Taku River salmon are hoisted aboard B.C. Packers' barge to await shipment to transport plane.

Transporting the catch was a problem as well. Fish were to be picked up from fishermen at specific hours each day and transported to a refrigerated shed located on the air strip some five kilometres away to be flown out. This meant that fishermen had to hold on to fish until the specified delivery time each day. On more than one occasion, the buying crew was late due to a mechanical breakdown or road washout, and fishermen would have to wait until the crew showed up. Sometimes, during periods of heavy catches or long waits, fish were not held in proper containers.

continued on page 10

Taku...

Originally, B.C. Packers had hoped to use a C-46 (military version of a DC-3) to fly the fish from the Taku River to Prince Rupert. Unfortunately, it developed mechanical problems and could not be used. After experimenting with a variety of flying/trucking combinations, the one finally used involved flying the fish to Dease Lake in a twin engine Beechcraft, using a refrigerator unit to truck them to Stewart where they were taken by packer to Prince Rupert. With so much handling, the product was sometimes of very poor quality by the time it reached Prince Rupert.

The bulk of the fishing in 1979 was done by setnets (each permit holder could use two nets--each one no greater than 30 m). Near the end of the season, some of the fishermen started drifting and found this increased their success somewhat. In all, 13 permit holders (one did not fish) took 13,578 sockeye, 6,006 coho, 13,661 pink, 15,474 chum and 97 chinook in 50 days of fishing.

There were many noticeable improvements for the 1980 season. B.C. Packers had a brine barge in location and set up in advance of the fishery; fishermen had nets hung and had more suitable boats for the river (shallow draft boats--many with jet drives instead of propeller drives) and the Department had a patrolman hired for the season. A fish buyer was stationed near the brine barge and the fish could be taken anytime and put into the -2°C brine immediately. When the aircraft was ready, the fish were put into totes, covered in ice and ice blankets and taken to the airport where they were lifted into the DC-3 by a forklift. After a two-hour flight, the fish were in Prince Rupert. This greatly improved the fish quality.

Another, very noticeable improvement was the catch. This year, the number of permit holders in the area from week to week varied between 10 and 14. Yet in 39 days of fishing

Commercial fisherman displays catch in Taku fishery.

(22 percent reduction compared to last year) fishermen took 22,602 sockeye (81 percent increase), 6,405 coho (6 percent increase), 26,821 pink (96 percent increase), 18,516 chum (18 percent increase) and 225 chinook (132 percent increase). The reason for the drastic increase was that most of the effort shifted from setnets to driftnets. Almost all the fishermen became very efficient at drifting and located new drifting areas in addition to the few that were utilized last year.

Although the two seasons were good as far as returns to fishermen were concerned, B.C. Packers reported heavy losses during the two years. They had hoped to make up the first-year losses during the second year of the fishery, but costs were still very high. B.C. Packers reports the average cost per pound to be 50 percent higher than coastal operations. Already, profit margins are such that added costs of this magnitude cannot be absorbed.

In 1981, the fishery on the Taku River will proceed without the involvement of B.C. Packers who have withdrawn due to economic considerations. The fishermen have joined together and arranged for sale of fish on both local markets and in Prince Rupert.

Bert Ionson
Fishery Officer
Haines Junction, Yukon.

Whitehorse

Lake stocking in limbo

The Department has been stocking Yukon pothole lakes around community centres such as Whitehorse, Faro, Rose River and Watson Lake with rainbow trout and/or coho salmon since 1958. The two primary objectives have been to provide easily accessible, year-round sport fishing opportunities for Yukon residents and to create new fisheries to reduce pressure on native stocks.

The last stocking program took place in the spring of 1977. Approximately 100,000 coho fry were planted in 11 lakes which ranged in size from 5 to 47 ha. The stocks grew rapidly, and catchable fish (25 cm) were available in some lakes by the fall of 1977.

To assess the success of the Department's stocking program, a questionnaire was sent early in 1981 to 12 percent of the Yukon residents who purchased a fishing licence in 1980. From the returns to date, it has been determined that approximately 15-20 percent of total angler fishing in 1980 was spent fishing lakes stocked by the Department. The majority of anglers who prefer to catch both rainbow and coho salmon would like to see stocking continued and would pay an increased licence fee for an accelerated stocking program.

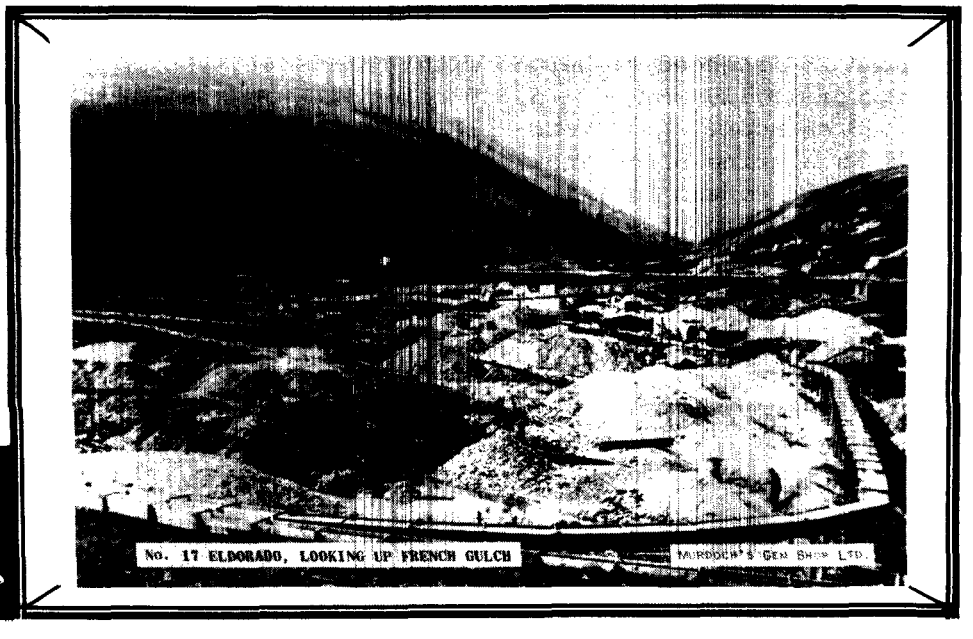
We know that the introduced stocks are becoming depleted, as indicated by test netting, angler interviews and the fact that coho seldom live over 5 years. Prior to 1978, the stocking/restocking programs relied upon donations of fry from various government hatcheries. However, with the introduction of new fish-health and transplant regulations in 1977, aquaculture in the Yukon has ground to a halt--certified disease-free stocks have not been available from past suppliers. Unfortunately, we do not have the resources required to purchase certified stocks from private hatcheries.

There are three alternatives to choose from if the Yukon aquaculture program is to continue:

1) develop stocks within the Yukon
2) certify stocks in some of the existing Department hatcheries
3) buy fish from certified private suppliers.

If the program is discontinued, we will be forfeiting the twenty years of success and self-esteem generated to date; moreover our image would surely suffer.

Pete Etherton
Technician
Whitehorse



The Eldorado, richest claim staked in the Klondike gold rush. Can anyone spot French Creek?

Whitehorse

Expert assistance appreciated

All too often we hear of friction between the Habitat Protection Division (HPD) and the fishery officer. Some fishery officers have developed a reluctance to call upon the HPD to assist in habitat matters, or even to to call upon them when in need of an expert witness. To find an individual who has sufficent knowledge to be qualified in one particular subject can at times be a frustrating exercise. After my last court case, I think I can sympathize with the HPD.

Two experts were put on the spot in March. Maureen Wayne, Biologist, Water Use, and Ian Birtwell, Head, Habitat Research Program, were called upon to give expertise on marsh habitat. Both Maureen and Ian spent long hours investigating this case, with onsite inspections, research and consultations with the prosecutor. They gave 200 percent effort into this case. Ian had an easier time on the stand as the defense council had already locked horns with him in a previous case. Maureen excelled as a first time witness. Her extra reading on the subject matter turned out to be invaluable. The defense counsel played on what he thought were her areas of weakness, but she struck back with the accuracy of a spitting cobra.

Although we lost the case, I would like to thank these individuals for their time, effort and patience throughout the whole proceedings.

Scotty Roxburgh
Fishery Officer
Whitehorse district

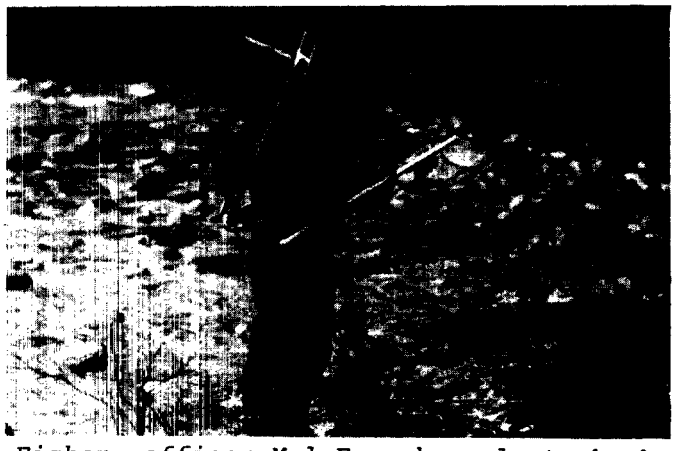
Stikine important in Yukon South

The Yukon South-Northern British Columbia subdistrict encompasses an area of approximately 440,000 km^2 and includes the Unuk, Stikine-Iskut, Liard and Upper Peace River drainages. Subdistrict staff comprises a fishery officer and two three-month patrolman positions. At the present time, the Stikine River receives much of our attention because of stock assessment and management of the commercial salmon fishery. During 1980, this fishery supported 25 licenced fishermen with landings of 18,119 sockeye; 6,629 coho and 1,488 chinook. Fish were held on the grounds in a brine barge and then transported by air to the British Columbia Packers Prince Rupert plant. Management of the Stikine River fishery is complicated by access problems. To reach the site of the fishery requires a 800 km drive from Whitehorse to Telegraph Creek, followed by a 200 km speedboat trip down the Stikine River.

Other subdistrict duties involve management of the freshwater commercial, domestic and sport fisheries within the Yukon Territory combined with habitat protection activities relating to logging operations in the Liard River watershed and mining operations throughout the subdistrict.

Major problems in the subdistrict relate to excessive travelling distances and the shortage of staff and funding.

Mal Farquhar
Fishery Officer
Whitehorse



Fishery officer Mel Farquhar electoshocking stream prior to placer operation.

Whitehorse

Down the Yukon river

Dawson City is the central hub of both the commercial and domestic fisheries in the Yukon-Arctic subdistrict. The commercial fishery takes place on some 500 km of the Yukon River and the fisheries guardian patrols this at least three times a week. All travel on the river is done in a 5 m Boston Whaler until the middle of October when flowing river ice hampers further operations. Included in the patrolman's duties are enforcing regulations, gathering biological statistics, forming a close association with commercial buyers, selling licences, assisting in placer mining inspections and answering the questions of tourists.

All of the 43 commercial and 41 domestic fishing licences reported sales in the 1980 season but only three-quarters of all licence holders fished actively. The fish wheels, unique to the area, have started to increase in popularity again after a slow ten-year decrease.

Over the last few years, individuals have attempted to make a visible commercial market in Dawson. "Moosehide," the commercial fish sellers' coop, had a difficult first year in the area, but are more hopeful in their second year of operation because of increased support for the cooperative.

Tim Osler
Yukon River Guardian
Whitehorse

A taste of sourdough

For someone who was only going to spend three months in the Yukon, I'm not doing too badly. Five years later, here I am with another Sourdough Rendezvous under my belt. Rendezvous is the annual Whitehorse festival. It arrives just when you feel you're coming down with cabin fever (usually the last week in February).

This year, everyone was out to break the records previously set for flourpacking, swedesawing and log construction. A few rounds of snowshoe baseball were guaranteed to put you on the right track. A Rendezvous queen was crowned again and the dog teams were off, down the Yukon River (which by this time had been frozen for two months).

The last of the events was the bed race and that's where we came in. For two weeks before the race, all staff participated in building a "spawning bed" and making five huge sockeye salmon costumes. My costume was complete from head to toe, or should I say nose to tail? (I'm the one with the long eyelashes, lipstick, nail polish and a black sequined bikini.) The spawning bed certainly stirred up the crowd and even though we didn't do too well in the race, we won a prize for the most hilarious entry.

We all felt really good working together at something apart from daily fisheries work. It's great to know the people you work with are not only working partners, but are also good friends.

Carole A. Laurie
District Clerk
Whitehorse,

Fisheries staff, assisted by salmon recruited from local streams, participate in Sourdough Rendezvous parade.

Whitehorse

Vast area to patrol

The Yukon Arctic sub-district covers some 453,000 km^2. There are three highways that service this area, the Klondike, the Dempster, and the Robert Campbell, and there are numerous back roads servicing placer mine operations.

Apart from Whitehorse there are several small towns that service the Yukon. Most only have populations of 200-500 people, and all are accessible by road except Old Crow, which is a small native village. One has to fly into Old Crow or, if you're keen enough, go by dog sled during the winter months.

There are over 3,200 km of river to patrol. The major portion of the commercial fishery occurs between Dawson and the Alaskan border. Other fisheries such as native, domestic, and sport fisheries take place near major highways and towns. The Yukon River supports chinook, chum, and coho salmon; chinook and chums being taken in the commercial, and native fisheries, and chinooks by anglers.

Scotty Roxburgh
Fishery Officer
Yukon Arctic Subdistrict

What you can expect

by Pat Phillips

Every now and then we get some very ambitious staff member who decides, in his or her wisdom, to acquire some office equipment. They go to a great deal of trouble contacting companies, meeting sales representatives, and weighing the pros and cons presented by today's vast marketplace. They decide what they want, make up the requisition, send it in, and are somewhat annoyed when it is returned because they are not entitled to purchase this type of equipment. Staff cannot freely purchase office equipment.

Requirements of copy machines are governed by explicit regulations that require, along with a certain type of copier, Treasury Board approval. We are not allowed to shop around and get what we would like. Prior considerations are necessary when purchasing copiers. For example, the number of copies to be made, the type of copy work (straight copies or book copies), the number of persons who will be using the machine, and how the machine will be used with the present machine.

Recently, a circular was sent out to all staff concerned about copy machines. When this type of circular is sent out, everyone should read it. We should all be aware of the regulations governing the requirements.

I understand that the Material and Management Division (Purchasing to most of us) is no longer using, except in the case of emergency, "Regional Headquarter Purchase Orders." Staff have a $250 purchase authority in the field and the requisitions submitted for other purchases are going on to the Department of Supply and Services for purchasing, which usually means a four to six week wait. For those in the field, especially in isolated places, this may present a hardship and you should in all cases provide on the requisition, a reason for emergency purchase, if you wish to have the item purchased quickly. Please make this reason plausible and explain the emergency (for example, "for light generating plant--no other power available"). If there is any problem with the purchasing of items in this manner, the administrative office should be informed of the difficulty.

Unwritten dress code creates problem

Do you wear blue jeans to the office at 1090 West Pender or any other Department office, for that matter? If you do, you may be surprised to learn that blue jeans are not suitable office attire! (How can all those Lee, Rough Rider, and Le Culottier labels be wrong, especially in an environmentally based outfit such as ours?)

Do you also know that you can be sent home, like some errant child, for wearing jeans to the office and told not to return until you are appropriately dressed?

At least, that's what recently happened to a young woman who works at headquarters. Granted, this clerk was previously informed that her supervisors did not consider jeans to be appropriate office wear in that particular department. Supposedly, this was because the worker is exposed to high-level management and/or the public; however, although she would see (and be seen by) management and the public, she did not ordinarily deal directly with them.

However, when she wore jeans which she had hurriedly donned in one of those I'm-rushed-and-running-late-mornings, her supervisor could have informed her, once more, that jeans *still* were not acceptable and that, in the future, they should *not* be worn to the office.

Instead, the young lady was sent home. The result--at the very least, wasted travel time. Tongue-in-cheek, I suggest that the supervisor responsible for the inadvisable decision forfeit some of his pay in accordance with the amount of employee time lost. More important, this worker was embarrassed; she suffered a loss of dignity, however momentary. Most important though--this employee's rights have been violated; she was sent home for daring to wear, what many people on other floors customarily wear with impunity.

Employees deserve equitable treatment; this worker did not receive it. Apparently, Fisheries does have a dress code--I don't know if jeans are on the "acceptable" list. If they are, what right did this supervisor have to formulate a dress code based on his own personal preferences? And, beyond that, what right did he have to send this employee home if she did not meet it?

Besides, this supervisor's dress code made little sense; blue denim jeans are not permitted, while the same denim in other articles of clothing and jeans which are made from other fabrics are both acceptable. Jeans are more than a fabric (traditionally, denim)--they are also a "cut" or a style. Today, jeans are made from a variety of materials ranging from leather to silks and satins, and they come in a rainbow of colours. So, why are hot pink cotton or beige twill fabrics cut in the jeans style acceptable, whereas denim blue jeans are not?

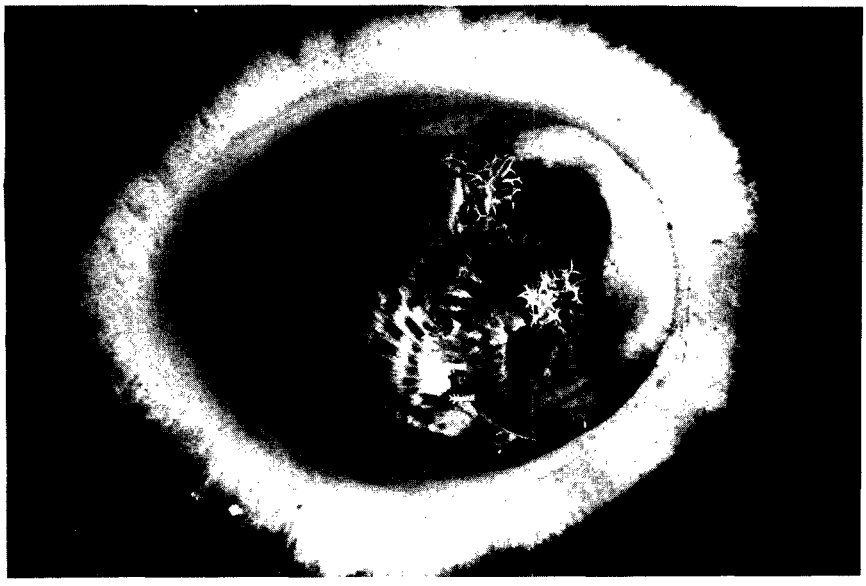
Freedom of choice is at stake if supervisors are allowed to determine dress codes randomly. For instance, are jeans any less acceptable than tight T-shirts or sheer blouses? I find it amusing that a modest pair of jeans can evoke such a reaction, while see-through blouses (clearly meant to titillate!) draw nary a glance.....of objection, that is! However, I feel it should ultimately be up to the individual (within reason) to decide what she/he will wear.

Management needn't be unduly concerned about what its employees are wearing; outrageous garb will receive adequate censure from co-workers. Perhaps though, management should be more concerned about its own image!

Linda Jamieson,
Bio-Science Planning Assistant,
SEP Planning

P.S. This article presents a case only, and it centers on the individual's rights; it does not deal directly with the pros and cons of wearing jeans to the office, nor is it meant to. Since there have been rumblings that some other supervisors in the office are also opposed to their workers wearing jeans, this problem will probably continue to grow.

Readers are invited to respond to this story with their opinions on a dress code at Fisheries. -Editor



Decorated warbonnet guards eggs laid safely inside a chimney sponge at a depth of 26 m near Pender Harbour. Photo was taken by Rick Harbo, a biologist with the South Coast Division. Is there anything you would like to contribute to Sounder? Deadline for the next issue is June 1.

Spurious emissions

Hank Scarth has returned home to Charlottetown, P.E.I., to become part of the new Gulf Region after a seven-month secondment to Pacific Region. Hank will be best remembered for his effort towards organization of the 1981 Commercial Fishing Guide.

* *

Joining Support Services Branch as Head, Financial Planning and Control, is David Mullen. Dave was previously with the regional office of the Department of Indian and Northern Affairs (DINA) in Vancouver.

* *

May Fricker, Accounts, leaves the Department for a promotion with DINA. Nancy McIlroy has left Offshore Division to pursue a more leisurely life.

* *

Judy Barnetson, SEP Planning, is presently on a four-month secondment at department headquarters, Ottawa. We understand that Ron Ginetz will follow, also on a four-month secondment.

* *

Marcia Waldron, a qualified library technician, joined staff in August, 1980. She is assisting the librarian, Paulette Westlake in giving special attention to staff information needs, which are the library's top priority.

John Davis has been appointed director general, Central Region, based out of Toronto; John leaves beautiful B.C. for the challenge of coping with the acid rain situation.

* *

Pam McKenzie has left Field Services Branch to join SEP. She leaves her secretarial desk to become special assistant to the Public Involvement Unit.

* *

Born to Linda and Chris Newton on April 8, 1981 a son, weighing 9 lb. 4.5 oz.

* *

Joining Personnel is Suzanne Hampson as a staffing officer. Suzanne comes from the Public Services Commission and she will be handling the Career Oriented Summer Employment Program as one of her first duties.

* *

Lily Jear-Ng, SEP Planning, has left the Department to become B.C. Tel's new planning analyst.

* *

Wendy Grider, also with Offshore Division, was the successful candidate in the recent competition for licence appeals officer; Phil Murray has been appointed chairman, Minister's Licence Appeal Board.

SOUNDER

Newsletter of the Department of Fisheries and Oceans, Pacific Region

Volume IX Number 4 June 1981

Pride of the fleet

The FPV "James Sinclair" replaces the old "Howay"

For pictures and story, see page 13.

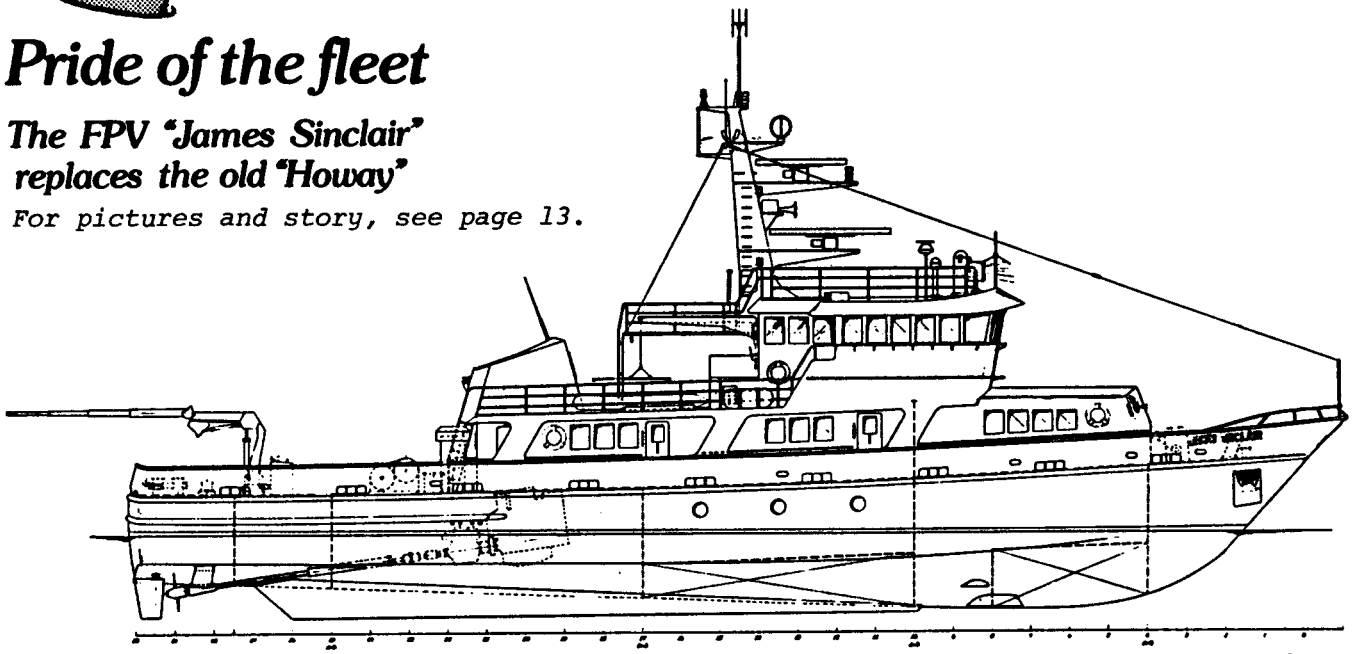


Illustration courtesy of RivTow

District Report — West Coast still isolated

One hundred and ninety-two km due west of Vancouver lies Port Alberni and the headquarters of Pacific Region District #4, the west coast of Vancouver Island.

In physical terms, the distance from Pacific Region headquarters in Vancouver is not that great, but the Island's west coast has always been slightly removed from the mainstream of the province. District Supervisor Don McCulloch stresses the difficulties that arise from the isolation of his district.

"It's management by Telex and staff circular," he explains. "To cope with this we have decentralized --and people are a lot closer when they're in Nanaimo than when they're in Vancouver--but it will take a while to feel the effects."

"And because I'm so fat on staff and we have so little to do over here, they're sending Ed to Ottawa," he adds with a chuckle.

Assistant District Supervisor Ed Lochbaum will be spending the next six weeks in Ottawa, to aid in the development of a habitat management program for the east coast of Canada. Ed is more optimistic about decentralization.

"With decentralization, doing business will be much easier. I foresee us getting closer to the root of the problem. We're seeing managers from Vancouver twice a month rather than twice a year."

Port Alberni district has the same number of staff--seven fishery officers covering 250 km of rugged

continued on page three

Guest editorial Train tomorrow for today

Dr. Chuck Chestnut, chief instructor of the BCIT fish and wildlife recreation program, is examining the training needs of present and future Department staff. Here, he explains the role of education in updating the individual and the organization.

Technology is advancing at an alarming rate; that is common knowledge. The problem for most mortals is not how to stay abreast but rather how to catch up with technology! The circumstance is so widespread that in the last five years there has been a remarkable increase, not only in the demand, but also the offering of updating courses, workshop sessions, special seminars and a host of other forums where people can obtain up-to-date information or gain the expertise to ensure themselves a place in this high-technology society.

One of the objectives of my sabbatical leave (which expires December 31, 1981) from the B.C. Institite of Technology is to familiarize myself with the duties and technical requirements of fishery technicians so that on my return to teaching, I will be in a better position to provide the required education. Coupled with this is the task of identifying and proposing in-house training programs to meet the changing job demands placed on technical staff in the Department.

Many companies and agencies have recognized that it is simply good business to ensure that their employees have the latest information and as a result they invest in training their personnel as they would invest in any prospect that would yield future dividends and thus greater prosperity. It sounds so incredibly noble these days for companies or agencies to "look after" their employees in this fashion. Well, obviously the company or agency is really looking after itself, but in so doing is indirectly expressing a confidence in its personnel and indicating to them that they in fact have a future in the organization.

The situation within government agencies is drastically different. The motivation is not profit oriented and therefore the "investment profit" from in-house training is far less tangible. Also, because government agencies are answerable to the public, it is often difficult, if not impossible, to justify training expenditures when some other function which may have public attention is inadequately funded. Is there any division or unit within Fisheries and Oceans that couldn't do a better job with more funds?

Nevertheless, the need for updating or in-service training has been recognized within the Department and there are activities underway to examine and meet the need. Through the Field Services' Training Coordinator, Brian Richman, several courses have been implemented to provide both recruits and incumbents with up-to-date knowledge and experience in such topics as herring sounder-sonar techniques, net construction, logging, pulpmills, commercial fishery operations,

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licencing, habitat protection and marine radio operations, to name a few.

In addition, under the direction of Ron MacLeod, Fred Ivineу has launched a Pacific and Freshwater Fisheries Human Resources Management Project. The project is designed to provide selected employees within all sectors of the Department an opportunity to progress to middle and senior management positions by means of a structured exposure (through secondment, for example) to the various aspects of management at each level of the Department. Currently, the project is providing updating management skills for supervisory staff via seminar sessions beginning in late May of this year. The main thrust of the project, the structured two-year program for potential managers, is awaiting funding. An additional objective of this project is to develop career structures for larger employee groups, including technicians. To date there has been, with the exception of some general Public Service Commission offerings, very little in the way of in-service training of technicians.

I plan to meet with the various technician groups, as I have been meeting with fishery officers, to determine their in-service training needs. Obviously I will not have the opportunity to meet all technicians or officers and therefore invite input via telephone (666-1847) or through a note to me on the 5th floor at 1090 West Pender Street.

I believe the climate is most suitble for establishing in-service training programs; in spite of obvious financial constraints, there can be little doubt that the need exists.

Not all training need be financially prohibitive. Within the Department, for example, there are many in-house experts who have the up-to-date knowledge and skills that could be passed on to colleagues and associates through workshop sessions. It is my understanding that this is occurring in many areas. What is needed is to identify where the deficiencies exist and this, in part, is the role I hope to play during my stay with the Department.

Dr. Chuck Chestnut

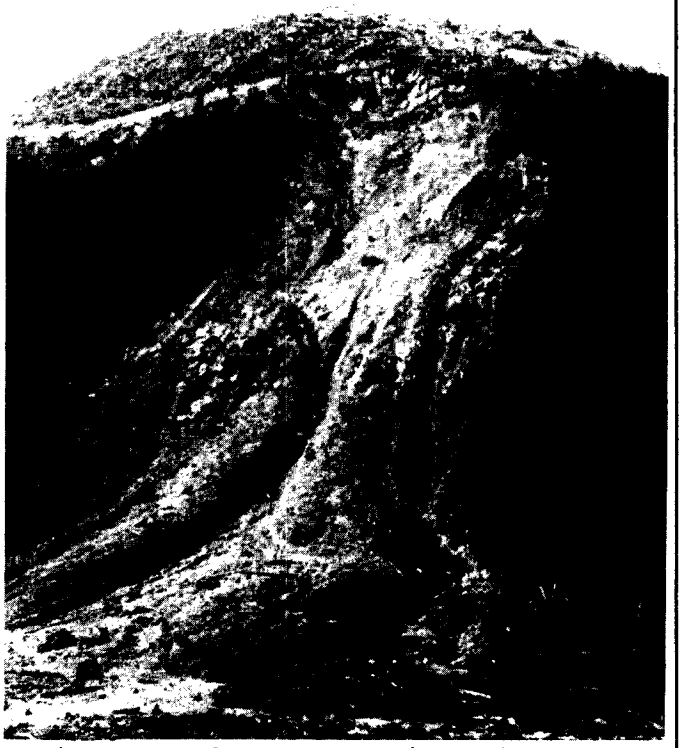
Port Alberni...

continued from page one

coast and intensively-logged mountains--as it had in 1949. In 1949, there was hardly even a road to the west coast of Vancouver Island. Now, for over ten years, the Pacific Rim has been opened up to the rest of the world. At the same time, the pace of development in the area has quickened.

The forest industry, chief employer in the region, is growing by 15-20 percent each year. The fertile rain forests contain the only virgin timber still being harvested on the B.C. coast, and given the forest's fertility, the industry will continue to expand. Between 30 and 40 percent of the province's timber harvest is cut here. Over 5,000 ha are logged within the district each year.

The ramifications for fisheries



Slide near the Klanawa River: "not a clearcut case."

Port Alberni...

are already felt. Habitat protection occupies 70 percent of staff time. Logging companies are now harvesting areas that were once uneconomical to log; steep slopes and remote reaches where the potential for damage to fish habitat is greater. Heavy rain and strong winds complicate matters. Ed laments the loss of Department Forest Hydrologist Dave Toews, who will soon be leaving to join the provincial Ministry of Forests.

"I think we're moving along with the rate of development on the West Coast. It's inevitable that fish habitat is going to take a brutal beating in some places," he says.

The impact on small streams is especially great. It is the combined production of small streams that represents a large portion of salmon production on the west coast of the island.

While virtually every other district in the Pacific Region is suffering a decline in natural chinook stocks, the Port Alberni district has a surplus of enhanced chinooks. The chinook stocks, enhanced by Robertson Creek hatchery near Great Central Lake and by strays from hatchery stocks, have been sufficient to support a commercial gillnet fishery in recent years. The quota for this fishery has almost tripled since 1978.

Sockeye and chum are the major commercial species in the district. Behind the sockeye fishery's successful history (a record 1.2 million-piece fishery in 1977 and another one expected this year) is the SEP's most precious gem: lake fertilization. Fertilization in several of Vancouver Island's largest lakes over the past ten years has produced remarkable sockeye returns. As well, the district supports a major commercial chum fishery, a herring roe fishery (representing one-third of the total herring roe harvest in the Pacific Region), a relatively large shellfish and crab fishery (1.9million kg of geoducks were taken in 1980, for example) and a fledgling but promising mariculture industry. The rich coastal waters are proving to be a boon for the latter.

Native food fishing for chum and sockeye takes place throughout the Port Alberni district. Food fisheries include: four river fisheries on the Somass, Hobiton, Nitinat and Henderson Rivers; one lake fishery on Nitinat Lake, a winter troll fishery and summer seine fishery in Barkley Sound and two gillnet fisheries in Sarita Bay and Grappler Inlet.

The excess of chinook salmon is encouraging a steady growth of the district's sport fishery, luring anglers with the promise of giant

A police line-up of several Port Alberni staff includes, from left to right, Sally Dzus, Don McCulloch, Barry Kanester, Dennis Girodat, Ted Sweeten, Ed Lochbaum, Al Cowan and Anne Gilbert.

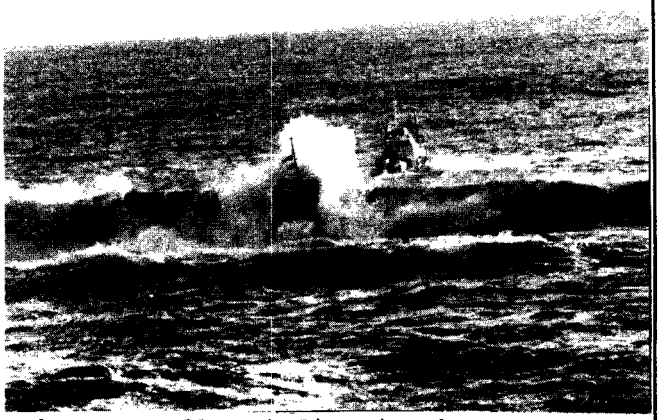
chinook and bountiful catches. A small resident population of 30,000 along the whole coast represents only a small portion of the anglers; most are tourists and the City of Port Alberni is anticipating the development of its tourist potential with the construction of a major harbor complex as well as new marinas and boat launching facilities. Here again, Don McCulloch feels an important Department concern, sport fishing, is not being given full attention.

"The sport fishery, minor habitat protection situations that start to pile up, no public relations work; we're not installing a sense of appreciation of the resource. It's all reactionary work."

"You do the best you can. I've got the best staff in the Pacific Region. It's a good thing, too."

"My staff is so excellent on management that I managed the 1978 herring roe fishery without saying a word."

Editor's Note: Don's voice, hampered at the time by a throat operation, seems to have improved, although he claims to be losing his sense of humor.



The Port Alberni district has no shortage of water, fresh or saline. Above, U.S. and Canadian patrol vessels buck surf and below, a misplaced logging road is flooded.

Hands on the land

An interview with Habitat's John Payne

In the second of this series of four articles on the Habitat Management Division, Sounder *talks to John Payne, chief of the Land Use Unit.*

Would you begin by describing the organization and role of your Unit?

The role of the Land Use Unit is to provide specialist expertise to help protect fish habitat from destruction or harmful alteration which might be caused by various land-based activities.

I have, in the Unit, eleven professional and technical personnel made up of biologists, engineering and biological technicians and a forest hydrologist. This staff of highly experienced and competent people provide professional advice on a variety of habitat matters to district staff, other federal departments, provincial agencies, industry and the public.

John Payne, Land Use Unit chief.

As for organization, the Unit is

split into two sections: Forest Harvesting and Urban Development, and General Construction and Transportation. We deal with such areas as log falling, yarding, transport, storage and handling; urban and regional planning and development; pipeline, highway, railway and electrical transmission line construction; flood control schemes; placer mining and some aspects of dredging on the lower Fraser.

One of our major responsibilities is the production of guidelines for use by Department of Fisheries and Oceans field officers and external agencies. We have guidelines covering urban development, culvert design, pipeline and transmission line construction, dredging on the Fraser River, and gravel-removal-order administrative procedures. The most recent addition to this list is the "Handbook for Fish Habitat Protection on Forest Lands in British Columbia" which has just been published. It describes aquatic ecosystems, fisheries and forestry resource management systems and interactions, forest harvesting practices, their impacts on aquatic ecosystems and measures for protection.

"Over the next few decades intensive forestry practices will have to be employed to maintain the existing level of industrial activity."

What do you see as the major problems facing the Department in these areas you have just listed?

Well, beginning with forest harvesting, the recent, provincial government timber supply analysis has shown that in many areas of the province the supply of wood will peak over the next few decades, and in order to maintain the existing level of industrial activity, intensive forestry practices will have to be employed. This could include large scale fertilization projects and more pressure to log the productive valley bottom lands on a relatively frequent and intensive basis. Another effect is the increasing desire to log higher elevation and steeper, unstable slopes. This trend may create more potential for situations like that at Riley Creek.

In the urban development area, burgeoning pressures in various parts of the province are creating many potential problems for fish habitat. However, we believe that, unlike the Lower Mainland situation, we can have a major involvement early enough in the planning process in areas such as north Vancouver Island and the Interior, to ensure that development occurs in an orderly manner with built-in stream safeguards. This depends on availability of staff, however.

Recently there has been a rash of pipeline proposals including the Alaska Highway gas pipeline, the gas pipeline to Vancouver Island and various lines to carry commodities such as liquid natural gas (LNG) to facilities on the north coast. All stream crossings present potential problems during construction, and particular care will be required with the line which will run the length of the east coast of Vancouver Island. A different concern is the fact that the Fisheries Act has been transferred, for the Alaska Highway line, to the jurisdiction of the Northern Pipeline Agency, and thus the Department has no direct control over construction in the Yukon. We can present our views to the Agency and hope that they will be incorporated in the environmental stipulations.

"There are many tight spots along the Fraser, where any further encroachment could have drastic consequences."

The federal government's plan to twin the CNR mainline between Edmonton and Vancouver poses some major problems with regard to upstream migration on the Fraser, Thompson and North Thompson Rivers. There are many "tight" spots where fish are already under stress and any further encroachment on

the river at these places could have drastic consequences. In addition, we have a salmon energy expenditure concern with regard to the cumulative effects of a series of falls along the system; these falls will increase velocities marginally so that although no one location is critical in itself, when added together, there could be a marked effect on spawning success.

The last area I will mention is placer mining. With the rising price of gold, activity in this area has greatly increased in the last few years. We must ensure that the regulatory system in place in British Columbia is strictly enforced so that the situation does not become like that in the Yukon, where, in spite of recent efforts to introduce controls, the industry remains an unmitigated disaster area from an environmental point of view.

Look for tagged crabs

As part of an investigation of Dungeness crab stocks on the south coast, the Shellfish Section of Resource Services Branch is conducting a tagging experiment in the Gulf Islands. The main purpose of tagging is to determine movements and extent of intermingling among populations around the main islands. Estimates will be made of fishing intensities and stock sizes, provided that recoveries are adequate and catch information is reliable.

The tag is the Petersen type, two plastic discs held in position on the right corner of the carapace by a stainless steel pin, as shown in the accompanying photograph. Although the tag is lost at moulting, it meets requirements of the present experiment.

From January 28 to March 20, 1981, 433 crabs of legal size (carapace width 165 mm and over) were tagged in 13 localities along the shores of Mayne, Samuel and Saturna Islands. To date, 139 tags, or about 32 percent have been recovered. Three tags were found by sportsmen. Emigration from Boot Cove on Saturna Island was revealed by 21 recoveries; 18 had moved to Lyall Harbour, a minimum distance of 0.8-1.1 nautical miles in 27-95 days.

There is a reward of $1 for each recovered tag. I respectfully request fishery officers and other field personnel who receive tags from

commercial and sports fishermen, to obtain the date and place of recapture, and shell condition, and forward the tag and this information to the Pacific Biological Station in Nanaimo. Questions about the tagging experiment or other aspects of the crab project are welcome.

Terry Butler, Biologist
Resource Services Branch
Pacific Biological Station, Nanaimo

Talking scales

On each of the hundreds of protective scales coating a fish, there lies the story of its life. The Scale Lab at 1090 West Pender deciphers the scale story and compiles information that is invaluable to management.

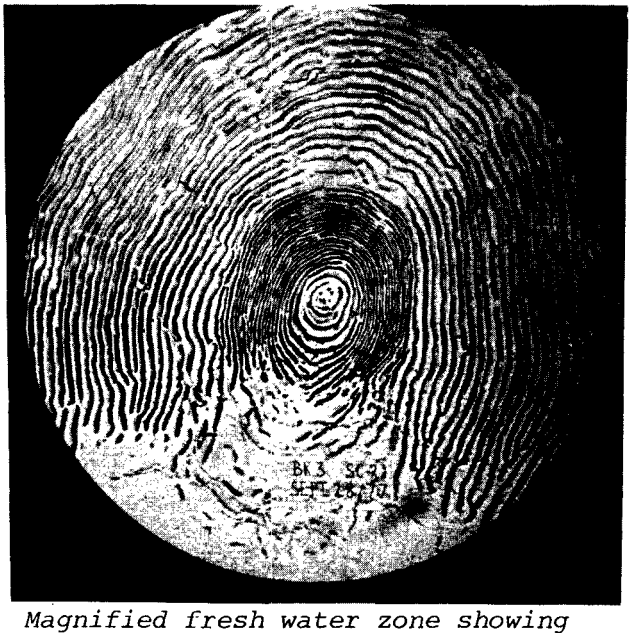
In the basement (known to some as "the dungeon") at 1090 West Pender Street we have the Age Analysis Unit, better known as the Scale Lab. Our staff includes a supervisor and two technicians, plus one seasonal student technician, who is usually located in a field office.

The lab is responsible for aging all fish scales, otoliths (ear bones) and fin ray sections sampled by the Field Services Branch [for test fisheries, Indian food fisheries, spawning ground samples, coded-wire tagging (CWT), and biological samples] and by the Salmonid Enhancement Program (for proposed facilities, rearing-channel growth studies, fertilization experiments, hatchery returns and estuary studies) and by consultants (for Fisheries contracts).

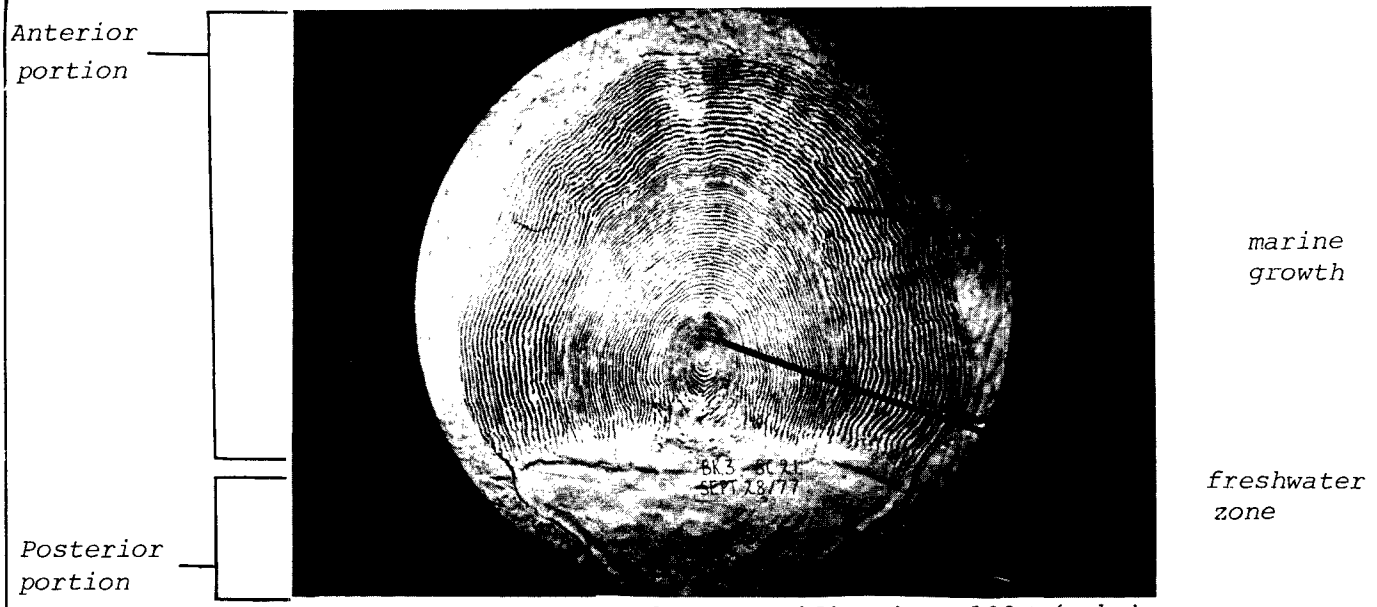
How old do you think I am?

Just *how* do you age a fish? Well, like a person's age, it's hard to tell from external appearances. With fish, it is not accurate enough to use just length or weight, as there is a great deal of overlap in fish size at a certain age. After many studies, some dating back to 1913, it was found that the scale of a fish shows a record of its growth throughout the seasons of its life. Comparisons have been made to the growth rings on a cross-section of a tree. The scales form when the fish reaches a certain size, and cover the body to protect it. Each scale is made up of bony ridges called circuli. These rings or ridges are formed concentrically around the focus or nucleus, and appear in the "anterior," or front part of the scale. (That is, the part of the scale which is hidden and close to the body.) The outer portion, which is exposed, is called the "posterior" portion and is usually silvery in color on an adult fish or smolt. As the fish grows, the scales get larger in proportion to the growth rate of the fish. During this time, some scales are lost by injury or disturbance and are replaced by "atypical" scales, called regenerate scales, which form quickly to replace the lost scales. These regenerate (replacement) scales no longer show the complete history of growth, so cannot be used to age the fish.

Because scale samples are easily obtained, it is the preferred method to use for aging, whenever possible. Although otoliths (ear bones) and fin clips (pectoral fin ray-sections) are additional methods of aging, in many species of otoliths are opaque and the fins unreadable. The otolith shows aging bands similar to the fish scale, in the form of light and dark bands for summer and winter growth. Otoliths are collected in the field by splitting the head of the fish and removing one ear bone from behind each eye socket. They are found to be less resorbed (eroded) than scales,



Magnified fresh water zone showing circuli formation and fresh water annulus. Magnification: 250X (coho)



nucleus magnification: 100X (coho)

which make them useful for total aging on spawning-ground sockeye and chum.

Fin ray sections are used only to assess the marine years (freshwater growth does not show) and can be used for chum and sockeye. Sections of pectoral fins are dried, cut in the lab, and viewed through a microscope. Preparation time is rather prohibitive, but in some cases use of fin clips is the more practical method.

Use of scale data

Why do we want to know the age of a fish? This information is important to properly manage the fisheries. Managers need to assess the age composition of the stocks in order to assess strengths of component brood years to determine applicable exploitation rates. Also, scales can sometimes be used to separate the stocks from two different river systems by using total age and numbers of freshwater circuli counted on the scale.

Scales are used to assess growth rates and patterns identified for wild juvenile salmonids and those released from enhancement facilities.

For herring management, scale samples are the only method used by management to assess age and stock separation, because with different stocks involved in a herring fishery, lengths of fish are extremely variable.

The scale lab is therefore responsible for correct aging of both adults and juveniles of the following species of salmon: sockeye, chum, chinook, coho and pink. Each species has its own scale pattern and can be identified by it.

In addition, whitefish, grayling, steelhead and other trout, smelts and lesser-known species are aged by scale analysis, as required by Habitat Management and other agencies. As this last group of fish does not die after spawning, some can reach an advanced age, and their scales are interpreted differently from those of salmonids.

We have scales on file in the lab from all species which have been sampled from all areas of British Columbia waters. We probably have one of the largest scale banks in Canada; included are samples of U.S. hatchery fish and "wild" Alaskan stocks. Correspondence and scale exchanges are made with the United States to provide more information and improve aging criteria for common fish stocks.

With the use of reports, references and returned CWT information, we have established, over a period of years, scale aging criteria which are constant and reliable. We endeavor to be aware of any changes in rearing, feeding procedures, experiments in

Talking scales...

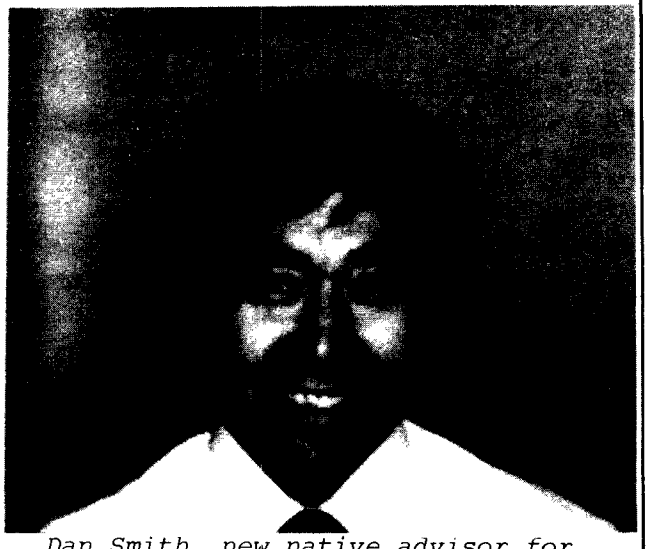
salt water rearing, and accelerated growth studies as well as any new or unknown river systems which have been identified as enhancement opportunities. It is a challenge to try to "keep up with" these new facts and changes which affect scale growth. The old saying that "the more you know, the more you need to know" certainly applies to the scale aging unit.

Through cooperation with the various field sampling crews, technicians, biologists, managers, consultants and enhancement facility managers, the lab will continue to provide age interpretations for management, stock separation, growth studies or habitat protection, as required by the Department on the West Coast.

Yvonne Yole
Scale Lab Supervisor
Field Services Branch

A native voice for native needs

Dan Smith is new to the job, but the job hasn't been around very long, either. For the past two months, Dan has been the Department's Native Fisheries Advisor, a new position intended to help bridge the communications gap between the Department and native communities throughout B.C. and the Yukon Territory. If that description sounds like a mouthful, how about this: the job includes liaison not only for native food fishing, but also for native participation in the conservation, enhancement and management of stocks.



Dan Smith, new native advisor for the Department.

In the two months he has been with Field Services, there have been meetings with the executive and board of the native Brotherhood, Nishga Tribal Council, Lillooet Tribal Council, Bella Coola District Council, Bella Bella students, and the Skeena River Fish Management Committee, to name a few. More meetings are scheduled and there is almost daily contact with native groups by telephone throughout the province.

"I've talked mostly about my role in relation to the bands and have sat in on a number of the Pearse Commission hearings being conducted in the province," Dan says.

"While I am in the communities, I make it a point to contact the district offices to introduce myself and to inform the field staff that I'll also be introducing myself to the native groups in the area. This, of course, is to maintain and establish good comprehensive dialogue between all of us.

"I'd like to meet with all the native groups and our field staff and listen to concerns so that we may begin to work towards a solution of our common concerns, the management of the fish stocks, but my schedule at the moment just won't permit it."

Dan is concerned about the negative image that both the Department and native people have been labelled with by the general public and each other. He is especially concerned over the image many non-native people still have of native people who haphazardly disregard conservation measures for the sake of food fishing or profit.

"We're all in this business together."

"It must be understood that it is not in the best interests for native people to deplete or endanger the fish stocks as it is an important part of a traditional culture and a way of life that has survived for many centuries for our people."

Dan would like all fishery and enforcement officers to recognize bands as having an organized system of government composed of the chiefs, council members, senators and elders.

"I would be quite willing to meet with Fisheries staff and trainees to answer any questions they may have regarding Indian people's interests and concerns in the fishery. The Department could benefit from having an intercultural awareness program to sensitize and familiarize non-native staff to the various traditions and cultures of the native people in any one particular area. It would also assist in looking at similarities of the two cultures, native and non-native. In turn, it might build an appreciation of how closely fish are linked to a way of life."

From his window, Dan has a panoramic view of the North Shore, including the Capilano Reservation. Dan ponders another concern as he looks at the dwellings across the water.

"We're not directly involved with unemployment in the native communities, but I'm sure the Department can encourage more native people to seek careers in the Department, particularly the native people who are choosing to reside in the urban areas."

"The native expertise is out there, it is just a matter of actively promoting a more positive image of the Department of Fisheries and Oceans."

Dan's position is not easy. He does not regard his position as a token one, but because of his heritage, he feels a strong commitment to meet the needs of his people. Since time immemorial, those needs have inherently expressed themselves as a concern for the fisheries resource. Dan points out that "the salmon has held the native people together through trading and bartering with other tribal groups over the centuries. It is quite possible the name of the spring salmon, chinook, was derived from the native, trading language, commonly known as Chinook."

Gayle Crouser
Editorial Assistant

Salmon symposium

The American Fisheries Society, Humboldt Chapter, California, cordially invites you to participate in a three-day symposium featuring the protection, enhancement and rehabilitation of anadromous salmonid populations and their habitat. The event will take place October 15-17, 1981, on the campus of Humboldt State University in northwestern California. Authorities and speakers from Alaska to California will be present, representing the entire Pacific Northwest. Partial reimbursement of travel expenses may be arranged for those presenting papers.

We have an exciting agenda that includes sessions on artificial propagation, watershed and riparian rehabilitation, and instream enhancement. For a copy of the agenda outline and further

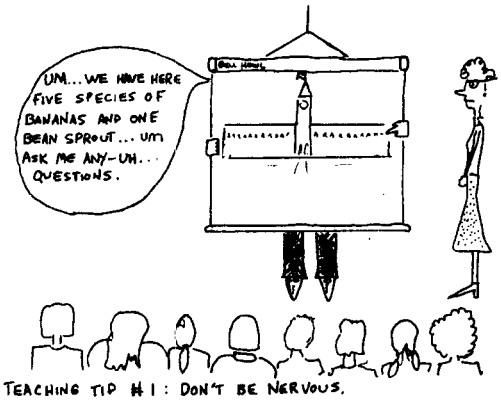
information, please write us at: "Symposium," c/o Fisheries Department, American Fisheries Society, Humboldt State University, Arcata, CA., 95521. Interested contributors may best contact us by calling Bill Brock or Kerry Overton at 707-442-1721, ext. 285/286, or Terry Roelofs at 707-826-3954.

Note: Attendees must have approval under the Regional Conference Plan.

Teaching tips for fishery officers

This is the first of a series of three articles prepared by Linda Bermbach, SEP education consultant, for fishery officers and others whose schedule includes teaching in the classroom or in the field.

Do you have the classroom jitters? We all got them as students; we all get them again as "educators." The only way to minimize the effect of these jitters is to go into the classroom WELL PREPARED.



TEACHING TIP #1: DON'T BE NERVOUS.

If you receive a request from a classroom teacher:

1. Do make sure you have been given lots of lead time (one week minimum).

2. Do ask for a conference with the classroom teacher as soon as possible. At the time of this meeting you should discuss:

   a) your topic;

   b) how your topic/presentation fits in with his/her total treatment of the subject;

   c) class control situations. The onus should be on the teacher to ensure cooperation by all students;

   d) your equipment needs--projectors, measuring data, collecting paraphernalia;

   e) such details as the appropriateness of wearing your uniform, transportation arrangements for students, class size, need for adult supervisors if on-site work is required;

   f) appointment of a class helper. This individual should meet you just prior to your presentation, introduce you to the class, assist you in setting up equipment, handing out material and other duties;

3. Don't be afraid to refuse a request if:

   a) you feel unqualified to present the topic;

   b) you have been asked to do the presentation at an inconvenient time (i.e. conflict with job responsibilities);

   c) you have not been given enough lead time;

4. Do plan ahead. Don't leave your presentation to the last minute because:

   a) you represent Fisheries and you may be the first and only contact some children have with the "people" part of the resource;

   b) the surest way to maximize the jitters is to be unprepared or poorly prepared.

5. Don't ever be hesitant to admit to a group of students that you are unable to answer a particular question. If the question is a good one, say so. Assure the student that you will direct him/her to another person who can supply the necessary information.

6. Do approach the classroom experience in a positive way. Students, generally, respond extremely well to outside resource people. They regard you as an expert. If you are enthusiastic about your subject and enjoy children, your audience will also be enthusiastic and supportive.

Remember, you are a valuable asset to any classroom teacher and his/her students. Since you, as a resource person, are willing to make a commitment, expect the same of the teacher and the students.

Dave Denbigh well remembered

Dave Denbigh, creator of numerous Fisheries displays, books and brochures, died last month at the age of 70.

Dave began with the Department in 1951 by illustrating scientific publications at the Pacific Biological Station.

His artistic talent was soon discovered and he was called upon to design displays for the Biological Station's open house. He assisted Ottawa's Information Branch in the design of exhibits, including the CNE and PNE, across Canada. His work also appeared in Germany, Washington DC, and Rome, to name a few. Dave is probably best remembered for his Law of the Sea Conference portfolio which encouraged the world to recognize the rights of world's salmon producing nations.

His long-time friend and associate, Dr. Leo Margolis, recalled highlights of the Denbigh family, including a prosperous canning industry in Kamchatka, USSR, prior to the Russian Revolution in 1917, and later on, commercial fishing in Victoria. Before the Second World War, Dave ventured to England and the continent to study theatre, ballet and painting. During the war, he was captured and imprisoned in a German prisoner-of-war camp until the end of the war four years later.

He then met and married his surviving wife, Edith and had two children in Austria.

The Department owes Dave Denbigh a sincere debt of gratitude for his many contributions in bringing the value of the fishing resource to the public's attention. We extend our deepest sympathy to his wife, Edith, and their three sons and daughters.

Gayle Crouser
Editorial Assistant

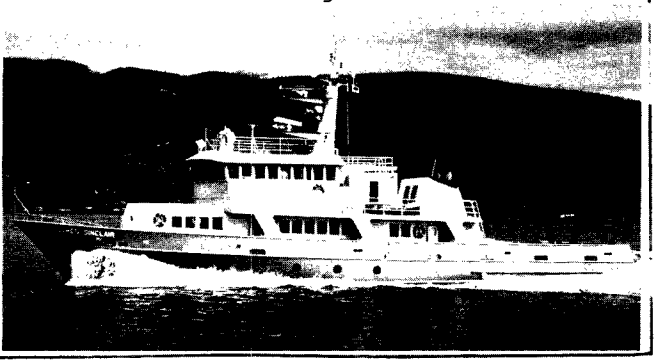
"Maggies father" weighs anchor

Latest addition to the Department fleet of patrol vessels, the 37.8 metre FPV "James Sinclair", was christened May 14 and is currently undergoing final additions in New Westminster.

Constructed of welded aluminum, the "James Sinclair" is similar in design to the FPV "Cape Harrison" and the FPV "Louisburg", Department vessels operating on the Atlantic Coast. The ship is slightly modified though, to meet the special requirements of the West Coast fisheries and contains the very latest in fish sonars, communications gear, depth-sounding equipment, radar and electronic navigation aids. With a maximum speed of 18 knots, the 300 t vessel will be able to deploy rapidly from one fishery to another.

The "Sinclair" will be based in Victoria, while under the command of Captains Jack Gosse and Barney Ogmundsen.

Former Fisheries Minister James Sinclair gives speech and (below) the "Sinclair" during sea trials.



What you can expect

by Pat Phillips

I know I'm beginning to sound like a gramaphone record but unless everyone takes note, we are going to have some serious problems.

Again, I have seen a list of employees whose supervisors have not submitted WCB form seven, Employer's Accident Report. If you, as an employee, see a medical doctor for an injury sustained while on duty you must report it to your immediate supervisor and ensure the WCB form seven is completed, and again, I remind you, if your claim is turned down by WCB, then you, not Medicare, are liable for the medical costs.

Also, some employees seem to think all they have to do is lift up the phone and say "Hey, I won the competition for such and such job; I want to move tomorrow and I need money for a house hunting trip," and expect full cooperation from us. Let me remind you all that no relocation begins, and that means house hunting trips too, until the "forecast for removal" form has been completed and the appropriate branch director has signed it. The appropriate directors are the only signing authorities for relocation. When you get the "relocation directive," read it thoroughly; don't presume signatures are not needed because they're not mentioned in the directive.

Don't make deals, spell it out on your "forecast for removal," so you have something to back you up. Also, I again remind you that I am not the final authority on what is to be allowed; that is done by Finance. The cooperation of supervisors in maintaining realistic dates of commencing new duties would make the relocation problems much easier to deal with.

When you get your cheque in the mail for relocating, then you may commence your house hunting trip.

The movers have stringent instructions on what they can move; the term "reasonable quantity of personal and household effects" is used. There is a section on what is applicable and this is important.

Letters

I would like to take this opportunity to thank the numerous Fisheries staff members for their concern and support following my bicycle accident last month. It gave me a very warm feeling when I realized that the large bureaucracy I work for is full of wonderful friends. Thanks to the groups from the 10th floor, 5th floor, and in Nanaimo for the beautiful flowers and cards, and thanks to all the individuals from Prince Rupert to Vancouver who personally sent messages.

Dave Schutz
Senior Biologist
South Coast Division

Spurious emissions

Dick Carson, is acting licence manager while Bill Webber is on leave of absence. Dick can be reached at 666-2076. Judy White, supervisor, Licencing, has a new number: 666-2075. New permanent staff include Linda Wiens, chief clerk who can be reached at 666-3160; Tina Schmidt is revenue clerk; and Nancy Hamilton, sport-fishing licence clerk, who can be reached at 666-2074. Three new permanent CR 3 positions were posted in May: licence clerk, receptionist-typist, administrative assistant.

* *

Recent births in Ship Division include: a daughter Marie Terese born May 4 to Susan and Ray Maratos, master,

"Chilco Post" a sister to Jennifer and George; a son, David Arron born May 11 to Joanne and Charlie Chang, cook, "Chilco Post." It was only last September when Hermina and Rod Mason, master of the "Chilco Post," celebrated the birth of Jennifer Lana Mason.

* *

Best wishes to Ed Christiansen, district supervisor, Kitimat, who retires from continuous employment with the Department on June 12. We wish you many happy years ahead, Ed.

* *

Jay Barclay, SEP economist, has returned to Vancouver after a 15-month secondment in Ottawa.

* *

New staff at 1090 West Pender include: Elizabeth Buchan, secretary/assistant to Director General Wayne Shinner's secretary, Lorraine Jung (sorry Lorraine, we forgot to announce your promotion last December). Elizabeth hails from Toronto where she had 12 years service in public relations with the CBC; Mary Poon, formerly with Vancouver School Board, was the successful candidate for secretary to director, policy planning and program development, Rod Palmer. Maurice Boisvert and Colin Masson joined the Department as project coordinators for Community Development, SEP.

* *

The Vancouver Fisheries Softball Team is undefeated to date in the federal league; they throw out a challenge to the Nanaimo softball teams to get prepared to fight for the Flounder Trophy!

* *

Decentralization of Fraser River Division staff to their new temporary quarters in the New Westminster Federal Building occurs this month. We understand that their new warehouse facilities in the B.C. Penitentiary are "ultra-secure" but less than desirable in other ways, including lack of heat and poor washroom facilities.

* *

Bob Leamont has been announced as senior biological technician for the North Coast, and David Southgate won the competition for technician at Babine Fence. Dennis Brock was the successful candidate in the competition for Area Manager, South Coast Division, but there still is no announcement as to who the North Coast Area Manager will be--speculation continues!

* *

Bruce Adkins won the competition for biologist, South Coast Division. His position will be shellfish-groundfish biologist in Nanaimo. Bruce was formerly with PBS.

* *

Bill Schouwenburg advises that as a result of a competition held in the Program Development Branch of SEP, Susan Steele was promoted to indeterminate biologist two, Margaret Peters to indeterminate biologist one and Don Radford to terminate biologist one.

* *

Born to Heather and Rick Harbo, their first child, a daughter, Jennifer, on May 15, weighing 8 lb. 12 oz.

* *

Recent marriages include: Don McCulloch, district supervisor, Port Alberni, who was married Saturday, May 9 to Loreen Harris, formerly a counsellor at Lethbridge Community College; we understand a number of Departmental staff including Gary Norberg enjoyed themselves at the bash. Colin MacKinnon, head, Fraser River, Northern B.C. Facility Operations, SEP, was married to Eileen Smith on April 18.

* *

Judy Barnetson, biologist, SEP Planning, also returns home from Ottawa this month, while Ron Ginetz, SEP Small Projects head, leaves for Ottawa for a five-month secondment. Sandy Fraser, economist with SEP, has also been seconded to the Minister's office in Ottawa.

* *

Dave Schutz has returned to work looking fairly fit after an accident on his 10-speed bicycle.

* *

Lesley McPhee, clerk, Kamloops, and formerly from the Vancouver office, leaves the Department on June 6 to pursue studies in Alberta; Susan McAddam, clerk, Nanaimo office, also has left the department.

* *

Newly appointment District Clerk in Victoria, is Kathleen Vose.

Spurious...

The appointment of Pam McNally as Executive Assistant to the Assistant Deputy Minister, has been announced. Congratulations, Pam!

* *

Decentralization to Nanaimo and Prince Rupert continues. Judy Hollingshead is the new secretary for South Coast Division. Tom Shardlow and Rick Harbo are moving to Nanaimo this month.

* *

John Stockner has accepted the appointment as Associate Director, Resource Services Branch, and will be headquartered at 1090 West Pender Street.

* *

Two recent retirees in Ship Division were Don Collinson, Relief Engineer, South Coast Relief Crew and Bob Scott, engineer, "Tanu."

* *

It turns out that North Coast Management Biology Unit not only lost half its staff due to decentralization but it is also "losing" equipment--the Tyee cabin at the Skeena Test Fishing Site has been reported stolen; not a minor feat considering its three-bedroom size!

* *

There have been many fishery officer moves and promotions. Randy Webb has made a lateral move from Bella Coola to Stewart GT 2; Elliott Tesky is joining Pacific Region as a GT 2 officer in Mission. Elliott comes from the North west Territories; George Vardy won the competition for GT 3 Prince Rupert while Pat Harvey has moved laterally from Prince Rupert to Williams Lake; Gordy McEachen, Duncan, has been promoted to Rivers Inlet, GT 3 position; while Dean Miller will move laterally from Rivers Inlet to Tofino as of June 16; John Inkpen has joined Offshore Division as a junior fishery officer; Elmer Fast from Northwest Territories moves to GT 2, Nanaimo; and Lawrence Chambers, Madeira Park, is resigning to go into private business.

* *

Evelyn Leverton has left Administration to work in the Department of Agriculture.

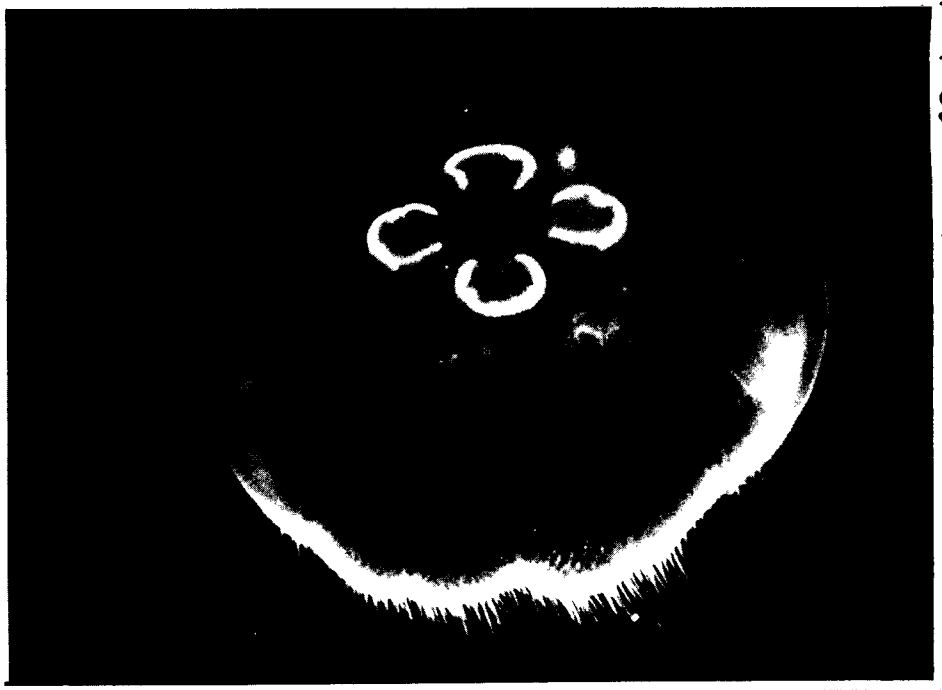
* *

Sylvia Aryee is leaving Purchasing to pursue her own business interests. Good luck Sylvia!

* *

Vessel Masters for the new "James Sinclair" are Captain Jack Gosse and Captain Barney Ogmundsen; the "Howay" retires from service in June.

* *



From inner space to you

A "moon jelly", common throughout the Strait of Georgia, is caught through the lens of Rick Harbo's camera. Rick, a biologist with the South Coast Division, makes a hobby of underwater photography. Sounder *regularly accepts contributions of photos, writing, drawings, opinions or ideas from Department staff. If you have anything to contribute, remember, the next deadline is July 15, 1981.*

SOUNDER

Newsletter of the Department of Fisheries and Oceans, Pacific Region

Volume IX Number 5 July-August 1981

During a recent visit to Capilano hatchery, Prime Minister Suzuki of Japan observes nose tagging. Hosts Eldon Stone and Harold Swan look on. (Derek Stone photo.)

District Report

Islands in the clouds

Isolation in the Queen Charlotte Islands is as much a way of life as it is a geographical fact. Isolation hits like the chilling winds that run across Hecate Strait, 150 km of the roughest seas on the coast. Isolation expresses itself with the absence of the supplies that never arrived and the cost of the ones that did. Isolation persists despite the "Queen of Prince Rupert," which last year began nosing its way into Skidegate Landing three times a week.

There is beauty and solitude throughout this group of 100 closely-knit islands, but the isolation, says District Supervisor Kip Slater, can be no fun at all.

"We're too far off in left field. I've never worked as hard in my life as in the two years that I've been here," Kip says.

The problem, he admits, is one that is common to staff in outlying posts in the Pacific Region. The Queen Charlottes epitomize the situation with the high cost of food, the scarcity of land available for housing and the lack of proper services. Many Island people adapt to the situation by eating only venison or seafood, becoming involved with their communities and building their own homes on small parcels of land. Many who cannot adapt turn to alcohol, or leave the Islands altogether.

To district staff, working in the Queen Charlottes has its advantages and its disadvantages. Remoteness from regional headquarters allows for more independence and individual responsibility for managing fisheries, but by the same token the fishermen are

continued on page three

Kid talk and cow pies

A rambunctious horde of kids from K.B. Woodward Elementary School in Surrey descended on Penny Lane Creek recently to assist SEP Community Advisors Joe Kambeitz and Bryan Allen with stream clearance work. Both the weather and the local livestock proved to be less than hospitable, but the team got the job done. When it was all over, the kids' teacher, Chris Zimich, had them write letters to the advisors. Some of the letters are reprinted here.

Dear Mr. Kambeitz

Thankyou for taking your time and for helping us. Thankyou for giving me the tip on how to get the mud off- (yourselfin) (yoursefl) (Sorry but I make a lot of mistakes)-yourself in the wilderness, it will come in handy. If you have any more tips please tell me and I would like to learn a lot about fish please use the address at the bottom of the page. Thank-you for-(for) (ey) (ther) (there I go again) -everything.

Oliver Kuelrn
(your fellow German)

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Dress code

Hugh McNairnay, former fishery officer now living in Salmon Arm, B.C., provided us with his cartoon comment on the dress code at 1090 W. Pender. Hugh recently completed a series of cartoons that provides comic relief in the new *Handbook for Fish Habitat Protection in British Columbia*, prepared by Habitat Management Biologists Dave Toews and Mike Brownlee. The handbook should go a long way in providing both industry and government with habitat protection guidelines.

Dear Mr. Kambeitz

I realy enjoyed being with you and letting us come over. The best part I liked was being in the deep water and cleaning it out. And most of all helping you. I would like to come over next time and help move the rocks and put gravel on. Mr. Zimich said he'd talk to you on that. But I would rather not change in the tent next time and I think my best friend Kandace Ross would rather not either. I would really appreciate it if Kandace and I could come next time and it would probably be more enjoyable if we could stay longer next time. But I enjoyed myself and I hope you did too. I hope to see you again.

Tracey L. Wolf

Dear Mr. Kambeitz

Today, as you know, we (Div.9) came to clear part or as much as we could of your stream. I had a good time and I hope you did too. It was really fun clearing out logs and other things. I like getting soaking wet and filthy up to my neck(sometime). I hope we weren't any trouble. I guess the best part was pulling out logs or falling in. The worst part was when Bryan (Allen) peeked in when the girls were changing. Luckily, I was still dressed. Thank you for letting us come, hope to come back soon.

Nina J. Schulz

Dear Mr. Kambeitz

The best part I liked was when the cow took a crap on my brothers jacket. I liked to hold the fish called a stidsellback. A stidellback hit Goszef in the leg. I liked it when I fell in the deep part of the creek. I fell down 3 times in the water. I had a good time on the trip. The goat milk tasted good but it did not smell good. I liked pulling logs out of the water.

Adrian Phillips

We thank Kelly Hollman, clerk in New Westminster for sending us these gems.

Queen Charlotte Islands

often friends and neighbors who come knocking at the door or phone after hours when something irks them.

"The fishery officer in charge must be responsible," says Kip, adding that locally, the Department's relations with commercial fishermen and natives are good. Staff were congratulated for the management of the 1981 herring roe fishery.

"When all the dust has settled, the fishermen will come over and say, 'that was okay'!"

The district has a total of five fishery officers; Laurie Gordon, Sue Hahn, Gerry Kozak, Ben Covey and John Lamb, who together patrol a coastline that, in actual distance, would stretch from Prince Rupert to the Gulf of Georgia. In addition, several major fisheries take place within the district, including a large roe herring fishery, a herring spawn-on kelp fishery (which represents nearly half the coastal quota), a halibut fishery, a gillnet-seine interception fishery, two native food fisheries on the Yakoun and Copper Rivers, and a troll fishery.

Staff turnover is high, Kip says, because of the isolation and the strain placed on staff as a result of insufficient resources. Poor radio communications aggravate the situation.

"It's impossible to handle a fishery like the herring roe fishery without good communications. You can't speak your mind when you know every fisherman on the coast is listening.

"We have a telex in this office. It's a big help. Up until last year there was nothing except word of mouth. There is a desperate need for improved radio equipment."

The relative size of the islands is a factor in the allocation of resources, but Kip would like the Charlottes to be given more consideration in light of its importance and because of the hardships of isolated staff.

The annual herring roe fishery in Rennel Sound calls for outside assistance from other districts.

Queen Charlotte Islands

District Supervisor Kip Slater (left) talks with Commander Beal of the Masset Armed Forces Base and Fishery Officer Ben Covey in front of B.C. Packers' Masset office.

continued from page three

"We're one of the smaller districts on the coast but one of the most important districts, too. There's the herring roe fishery, for example, which pulled everyone out of the fire this year." In order to properly manage the fishery, five additional fishery officers were brought in from other districts.

The population of the Islands has doubled in the last 20 years; as the forest industry has undergone steady growth, city-dwellers have come seeking the great escape, and the second largest industry, fishing, has attracted many fishermen from more crowded southern waters. However, the total population has stabilized at about 6,000 people, fewer than the number of indigenous Haidas that inhabited the Islands before they became a British colony in 1852. Today, half of the Islands' residents are natives, and the tribes comprising the Council of Haida Nations have registered one of the most ambitious native land claims ever made; they claim the Islands. More specifically, they do not want to displace whites already occupying land but want jurisdiction and sovereignty over their historic lands.

Native Indians play an important role in the Charlotte's fishing industry, especially in Area 1, Masset,

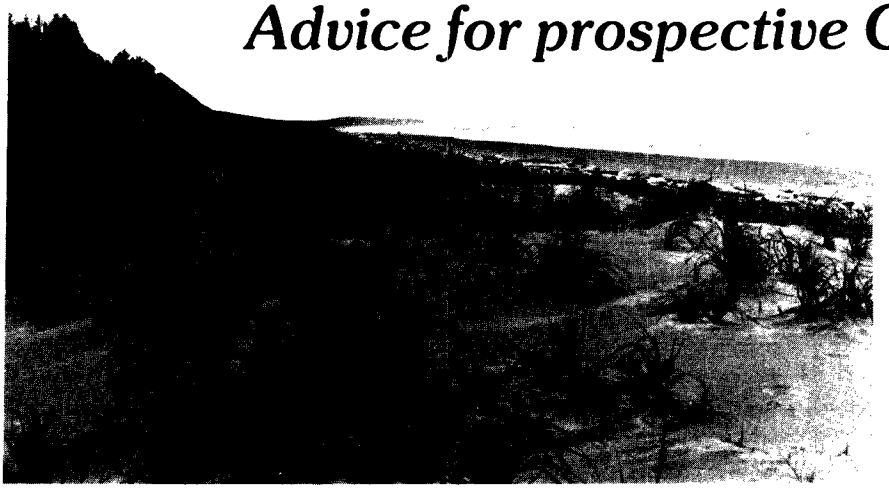
The highly mechanized B.C. Packers processing plant in Masset had "a super year" in 1980. The plant, which cans Dungeness crabs, has succeeded because of local initiative.

where Fishery Officer Ben Covey watches over a thriving crab and razor clam industry. The Masset troll fleet is now one of the largest on the coast. Native concerns also contribute to the keen environmental awareness on the Islands, which has given the Queen Charlotte Islands more than their share of controversy in recent years.

Mike Youds,
Editor

Queen Charlotte Islands

Advice for prospective Crusoes



Not everyone spurns the isolated post, but a few words of advice may help those who transfer to a remote area and suddenly feel as though they've left the planet.

The isolated post is often considered the training ground for young fishery officers in the Pacific Region. Fishery officer trainee Brian Spilstead, reflecting on an experience with heavy seas, attests to this belief.

"If you can handle yourself in those situations, then you can probably handle yourself anywhere."

Kip Slater has spent most of his time working in remote posts since he joined the Department in 1967.

"Get yourself involved. Jump in with both feet. Join the hospital board, the church or the local service clubs. If you're not careful, you'll get too involved with your job and it can ruin your family life.

"In many instances, local people are not going to actively seek you out. You have to take the initiative."

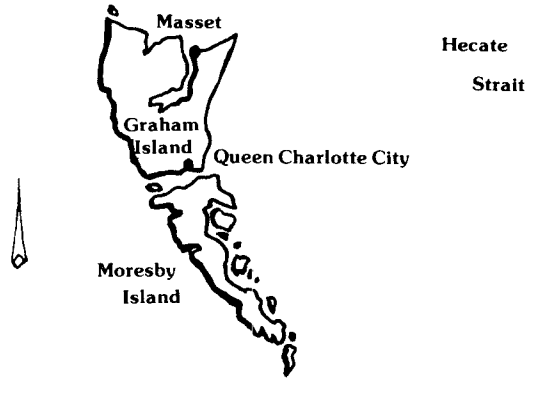
Kip served as an alderman in one of the areas he worked in and is now teaching scuba diving and has some involvement with the church in Queen Charlotte City. Fishery officer Ben Covey finds the social life in Masset can be depressing, but does volunteer activities at the Armed Forces Base to balance things out. John Lamb, habitat fishery officer, is busy helping his wife establish a garden supply centre and a Simpson Sears mail order office in Queen Charlotte City.

Kip offers another tip regarding financial matters.

"If you already have real estate, don't sell it or you will never get back into the market. If you don't have real estate, government subsidized housing is not a favor; find some land."

Working in an isolated area can offer benefits that city workers can only dream of. The Queen Charlottes are a case in point; a vast, richly-endowed wilderness, friendly neighbors and kinship that only an island can create.

The Queen Charlottes



Queen Charlotte Islands

Unique setting for model problems

No other area on the B.C. coast is quite like the Queen Charlotte Islands, which is why the district presents its own distinctive problems for habitat management, and especially for habitat fishery officer John Lamb.

John is (so far) the only district habitat fishery officer in the Pacific Region. The position was established four years ago in response to the rapid development of the habitat management field. The Queen Charlottes have been an ideal setting in which to test the effectiveness of such a position, there being a concentration of critical and controversial habitat issues on the Islands. Riley Creek rehabilitation study, South Moresby Island Wilderness proposal, and the Cinola Mines proposal are just a few of the difficult habitat issues.

One hundred and thirty years after the first prospectors sailed to the Queen Charlottes in search of gold, Cinola Mines believes it may have found one of the mother lodes. The problem is that the deposit is located less than 500 metres from the Yakoun River, the most productive salmon river in the Queen Charlottes and a mainstay for the native food fishery.

"They think that the volume of tailings stored there could represent a significant danger," John explains.

"The Haida categorically object and will not rest until the mine is closed down."

Actually, the mine has not opened yet, although a small-scale pilot operation is attempting to determine if the project is economically feasible. Cyanide, a toxic poison used to separate the gold from surrounding rock, is one of the concerns. Given the proximity of the mine to the river, even the spillage of trace amounts of the cyanide could result in fish kills. In addition, the mine area has abnormally high levels of (natural deposits) mercury. The mercury could be freed up through the tailings process, presenting yet another danger to the entire system, including humans. Already there have been two oil spills and one small tailings spill at the mine.

The Cinola mine may be a sign of things to come. In the last two months there have been 67 mineral exploration requests, although the iron ore mine at Tasu is the only fully operational mine at the moment.

Then there is Riley Creek, the scene of a fiery showdown between loggers and fishery officers during the spring of 1979. Overcutting timber on steep, unstable slopes resulted in destructive landslides. In response to the problem, a federal-provincial study was initiated.

"Riley Creek is now a laboratory," John says, "because more is known about that slope than probably any other slope in B.C., and it has offered a good, hard look at forest habitat protection."

Less severe glaciation during the last ice age has resulted in heavier soil deposits and a greater potential for erosion than other parts of the province.

Queen Charlotte Islands

Two basic conclusions have been drawn from research at Riley Creek. First, the waters below the slide area are well-stocked with coho fry. This may mean that the receiving waters below the Riley Creek area have had spawning success.

"The issue of Riley Creek being devastated (as a salmon stream) is false," John says.

Second, the Riley Creek slope has not been rehabilitated despite the money spent on rehabilitation so far. Scientists are now studying and restoring the slope with the knowledge that the slides are an ongoing phenomenon, not necessarily provoked by logging. They also have learned that root deterioration, following tree harvesting, takes three or four years, which delays site recovery. Although road erosion along the slope has been arrested, it is now known that cut slope stability of roads also takes several years.

"It's obvious from the research done so far that we must affect logging before it takes place, in order to prevent habitat degradation.

"There's no doubt that we're changing slope processes by logging," John says, "but the question is, how much?"

With heavy rainfall and prevailing winds, the Queen Charlottes present difficulties not unlike those of the west coast of Vancouver Island in the management of forest habitat. Unlike the rest of the province though, the Islands were not as severely glaciated during the last ice age and as a result there are heavier soil deposits and more potential for slides and sedimentation. As the Islands' main industry, logging cannot help but place severe strains on forest habitat. John works closely with the resident provincial fish and Wildlife Branch technician to ensure that standards are maintained. However, as with many coastal areas, logging in the Charlottes is facing an uncertain future.

Eroding land base will mean logging steeper slopes with more potential for damage to fish habitat.

"The total harvest on the Queen Charlotte Islands," says Tony Dyer,district forest manager for the Islands, "is about 4,000 hectares each year, or 2.8 million cubic metres of timber. If you consider logging as the major industry, and if you look at all the areas taken out of (forest) production--we review everything for cutting--then there is not a lot of land left.

"We are now finding areas where we are not going to harvest. The land base is eroding and we'll have to adjust to it."

That prospect, and its ramifications for the Island's forest industry, do not favor the South Moresby Island Wilderness Proposal. South Moresby Island was first overlooked by the logging industry because shallow waters along the shore prevented the usual means of access for logging. As a result, the area offers some of the last foreshore virgin timber in B.C., as well as beautiful, pristine surroundings. Many Islanders want the area preserved, while others do not want ecologists hindering the Islands' prime source of income.

"Once again," John says, "the Department ends up caught on the fence.

"I personally don't see it as a habitat problem because just about any

Queen Charlotte Islands

drainage can be harvested. The lobbyists who want it are searching for reasons to have it left as a wilderness. They're trying to show us that it is not only unique (because of foreshore virgin timber) but that it would also be difficult to manage from a Habitat point of view."

A more pressing concern for John is the mounting pressure by major oil companies for oil exploration along the B.C. coast. The shallow, sandy-bottomed Hecate Strait, between the mainland and the Island, is staked out for drilling by Shell Oil.

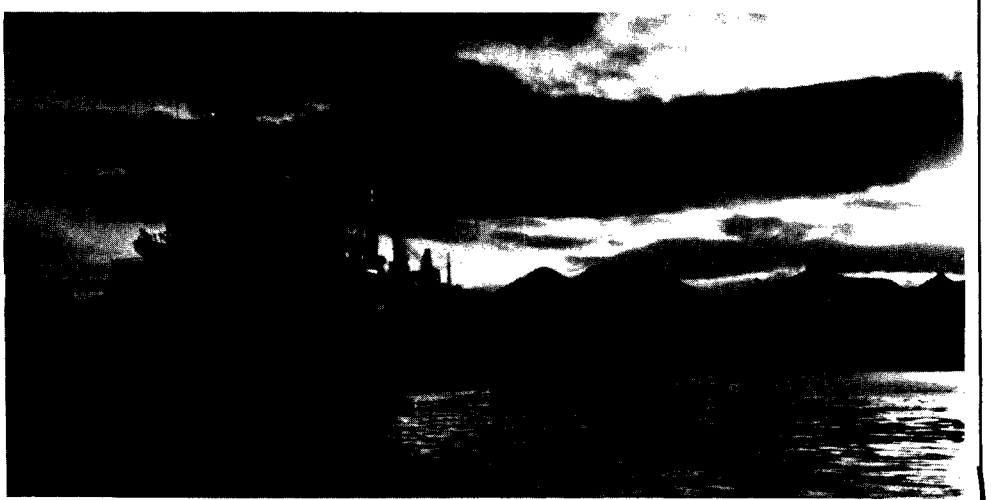
"The actual drilling is still a couple of years away," John says, "but the Hecate Strait waters are among the roughest in the world. They're as rough as the North Sea, and we know about the problems they've had there."

As well, there are no provisions for a serious oil spill in the Charlottes, although there is already an ongoing problem with minor oil spills.

Another concern is the Ministry of Forests' Timber Supply Analysis, which is due soon and which John expects will maintain the annual rate of cut on the Islands. What this means is further advancement of logging operations into steeper areas with more potential for habitat destruction. With all this and much more to manage, it comes as no surprise that John has requested assistance.

"I'm convinced there is work for two in the Queen Charlottes."

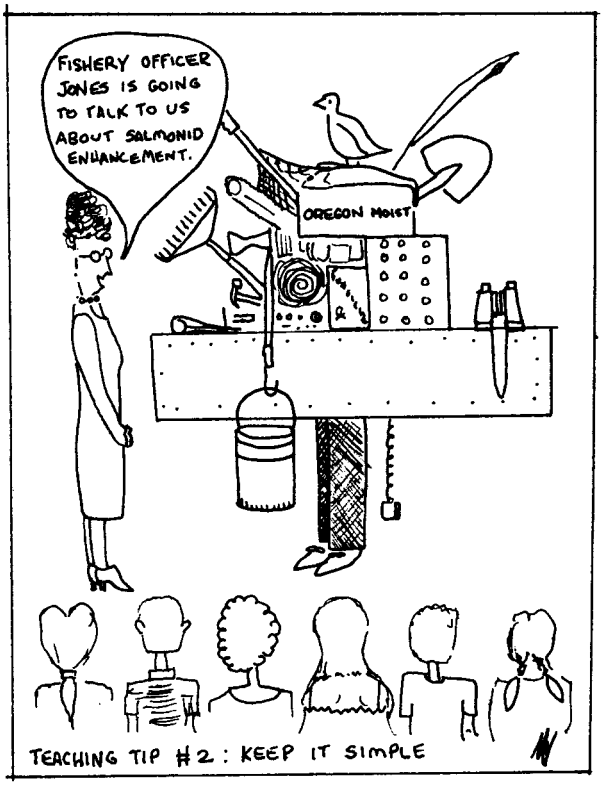
Logging operations on the Islands are advancing into steeper areas and increasing the potential for habitat destruction.



Ore carrier departs from Tasu Mine on Moresby Island. A sign of things to come for the Queen Charlotte Islands? (Photos supplied by Brian Spilstead)

Teaching tips for fishery officers

This is the second in a three-part series by SEP education consultant Linda Bermbach. In June, Linda discussed teaching preparation. Here she offers some tips on presentation and content.



1. Clearly define your objective.
   a) Clear objective: to explain the life cycle of one of the Pacific salmon and describe the hazards that affect it at each stage of its life cycle.

   b) Vague objective: to talk about fish and what happens to them.

2. Narrow down your chosen topic.
   a) An overly ambitious topic would be salmon habitat.

   b) Suitable topic would be fresh-water habitat requirements of coho salmon.

3. Decide on your method*of presentation. Sometimes a combination works best. You might try: a film, a lecture, a discussion, a field trip, or all four.
   * *In Part III of this series,each of these types will be explored in more detail.*

4. Check your resources, which may include:
   a) your own experiences, slides or illustrative material,
   b) 1090 West Pender:
      - Field Services Training Officer Brian Richman
      - Information Branch
      - SEP's community advisors;
   c) books or other reference materials;
   d) Salmonids in the Classroom (an instructor's package).

      The Salmonids in the Classroom package contains:

      - collected salmonid reference material on such topics as estuaries, harvesting methods, gear, coordinated resource management, stream habitat and the fishing industry;
      - twenty-two mounted transparencies illustrating such subjects as life cycle, anatomy,management areas and depletion statistics;
      - suggestions for appropriate audio-visual material and written guides for all salmon-related films or slide shows;
      - student's activity sheets such as word games, questions and research topics.

      Salmonids in the Classroom is available from:
      - fisheries district offices,
      - SEP community advisors' offices,
      - school district resource centers,
      - many elementary and secondary schools,
      - the British Columbia Teachers' Federation,

Linda Bermbach
Educational Coordinator

Skeena fishery : as a computer model

"In the future there will be increased application of computers to in-season management of major fisheries."

During the 1980 fishing season, the North Coast Region Fisheries staff in Prince Rupert used an Apple II Plus computer to aid their pre-season and in-season planning and in-season management documentation of the Skeena River fishery.

The data system used was designed to be flexible and easy to use by people with little knowledge of computers. It was developed by Environmental and Social System Analysts (ESSA), a consulting firm specializing in environmental systems analysis. The system is capable of handling several types of data, namely: weekly runs of sockeye and pink salmon (run, catch,and escapement); daily counts at the Babine counting fence; weekly age structure of the sockeye catch and escapement; fishery openings and the fishing gear present on a weekly basis; weekly catch of sockeye and pink from the test fishery; and weekly data such as age and circuli counts from scale samples, and the sex and length of fish. In addition, the data system is capable of handling, with little difficulty, additional data requirements for future use.

How the model works

A computer model is a mathematical equation which attempts to illustrate what goes on in reality. Of the two models developed for the Skeena River fishery, one type deals with a "training" simulator. This model allows the user to manage a hypothetical Skeena River fishery. The other type of model deals with pre-season and in-season forecasting, and is more concerned with "real" events as opposed to "gaming" events of the training simulator.

The training simulator is an adaptation of a similar program developed by Dr. Ray Hilborn at UBC. The version developed here has a greater degree of realism.

The model begins by asking the user for desired escapement levels of sockeye and pink, and estimated run sizes. The model takes these escapement figures, inserts them into its bio-mathematical equation and prompts the user to decide whether to open the fishery or not, provided the user knows the previous catches and escapements to the Skeena system. In this way, the user can develop a preliminary fishing pattern to begin the "game" season. A 16-week fishery may last only 15 minutes on the computer.

Next, the machine randomly selects an historical fishing season. The run size, timings, year and exploitations are taken from the data on the season. The user determines the days open and extensions for each week of the season. At any time during the season, the escapement, catch and run size can be reviewed and compared to the pre-season forecast. At the end of the "game" season, the program provides a user rating according to the departures from the desired escapements and deviations from proposed fishing patterns for the Skeena River fishery.

The second type of computer model involves two programs. One program calculates a pre-season proposed fishing pattern, similar to that part of the gaming simulator. The other related program facilitates in-season forecasting of run sizes and fishing patterns. The first program allows the user to design fishing patterns for various pre-season run estimates and timings. It is hoped that by testing different fishing patterns, a pre-season plan may be flexible enough to withstand the surprises of in-season events.

The second program calculates forecasts of the run left to come, given the run to date. The user may attempt a variety of fishing patterns for the remainder of the season, based on various assumptions of run sizes and timings.

Good results

As a result of this year's trial experience of pre-season and in-season

forecasting for the Skeena River system, one valuable observation was realized. Unlike Statistical Areas 5 and 6 (Grenville-Principe and Kitimat-Kemano), which are managed by catch per unit of effort, the Skeena (Statistical Area 4) is managed according to escapement leaving the fishing area. In managing to escapement, several test fisheries are required, but the escapement estimates produced reflect a more precise return of the Skeena stocks. This method not only provides a better indicator of the stocks returning to the Skeena River, but also avoids over-escapement into the spawning channel facilities of the Babine system.

The Skeena has a typical framework to which computerized technology can be easily applied. Possibilities for an Apple-type management system also exist in Smith and Rivers Inlets, and possibly Bella Coola; sufficient historical, commercial and escapement data are available, and the escapement counts can be taken at a counting fence. Therefore, it is probable that in the future there will be increased application of computer technology to in-season management of these and other major fishing areas.

Richard Moffat, clerk, seated before the Apple II terminal in SEP planning.

Margaret Peters
Program Development Biologist
Salmonid Enhancement Program

PRUNES — *the international laxative*

IC AREA CATCH OF SPECIFIC STOCKS PAGE 8

1974 - 1977 AVERAGE CATCH

O L L		O T H E R S		S P O R T		T C
PERCENT		PIECES	PERCENT	PIECES	PERCENT	PIECES
2.1410		239	0.0247	0	0.0000	6324

The Pacific Region U.S.-Canada NEgotiating System (PRUNES) is one of the key tools contributing to the major analyses and decision-making necessary for evaluation of the proposed Canadian-American Fisheries Agreement.

In use since 1979, PRUNES first became familiar to many Department staff in 1980 as a base comprised of interception estimates of salmon stocks in commercial and sport fisheries coastwide. In recent months, this base has been used as background information for preliminary evaluations of ramifications of the proposed Canadian-American Treaty.

In the simplest terms, PRUNES is a data base of several files containing annual commercial and sport catch data as well as landed and wholesale prices. The data base comprises a seven-year catch base, from 1971 to 1977, for all Pacific coast fisheries from Alaska to California inclusive. Modifications are now under way to update the catch base to include 1978-1980 statistics and to convert the system from imperial to metric.

PRUNES contains files on annual commercial and sport catches (for each statistical fishing area), annual landed and wholesale prices, and coastwide-averaged weights for chinook, coho, chum, pink, sockeye and steelhead. What makes

PRUNES...

this system so intriguing is its ability to distinguish between various area catches to indicate the estimated composition of stocks intercepted in any fishing area for each species and for each gear type.

Also part of the data base is a series of tables prepared by means of several programs. The programs have been written to extract statistics for any or all species, year(s), gear type(s), and fishing area(s) from the data base.

The information is presented on a computer printout, and the tables have been designed so that management biologists can read and understand them at a glance.

The table on stock composition of fishing area catch, developed with assistance from Pacific Region management and enhancement biologists, indicates by percent and pieces the estimated portion of any stock caught in a known fishing area. An actual year's catch for any species, gear type and fishing area remains the same, but the catch is broken down to show the estimated stock composition of the fishery. Conversely, the table on the contribution of specific stock to fishing area catches summarizes and lists all fisheries to which the stock contributes.

PRUNES has also been used for determining the effects of enhancement or reallocation possibilities. The base can be adjusted to reduce catch and/or increase stocks in any fishery, or coastwide for any stock, in order to analyse the resultant changes should the management of fisheries be modified.

In the case of the International Agreement, each of the fisheries policies can be tested with the present catch base to determine whether each issue is a benefit or a cost to the B.C. salmonid resource.

As the signing of the International Agreement draws nearer and SEP begins its program for Phase II, PRUNES should take on a more prominent role in the Department's assessment of fisheries management and enhancement opportunities. PRUNES printouts are available and will prove valuable to all interested user groups.

Margaret Peters
Program Development Biologist
Salmonid Enhancement Program

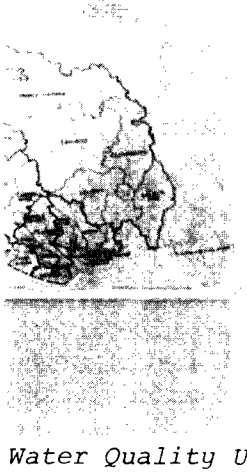
The water watchers

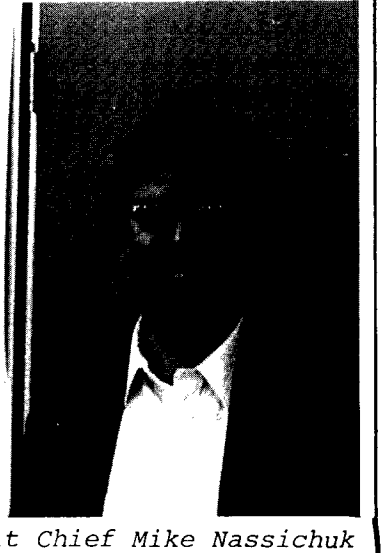
An interview with Water Quality Chief Mike Nassichuk

In this third in a series of four interviews with the Habitat Management Division, Water Quality Unit Chief Mike Nassichuk discusses the state of his Unit.

Could you describe the system used to ensure that water quality standards are maintained? In other words, how does your Unit operate?

Our unit operates as an entity with a mandate based primarily on the Fisheries Act and in particular, two key sections in the act; Section 33, subsection two, which prohibits the deposition of deleterious substances in-





Water Quality Unit Chief Mike Nassichuk

to waters frequented by fish, and also Section 31, which pertains to the protection of fish habitat. We have a responsibility to ensure that water quality and fish are not unduly harmed by various industrial developments, effluent discharges and the like.

We do this in a number of ways; by participating, for example, in interagency referral systems; by undertaking site-specific evaluations; by conducting short-term research or monitoring programs and by reviewing and developing recommendations on various developments which could affect the quality of receiving waters.

How will the recent review of the Habitat Management Program affect your unit?

It could affect our unit in some key areas. The habitat revitalization committee is looking at a number of topics within the habitat forum. There are numerous problems currently affecting the way our unit functions which will hopefully be addressed and resolved by the revitalization exercise.

"A number of problems affecting our unit will be addressed by revitalization."

These pertain to the organizational structure of the Habitat Management Division, communication networks within the Department; our liaison with other agencies, primarily the federal Environmental Protection Service (EPS) and the provincial Waste Management Branch; as well as any reallocation of resources that might result from the review. The greatest single problem is our small staff size at a time of an ever-increasing workload, primarily in the forum of major industrial developments, and the uncertainties associated with the joint responsibility of the Department and the Department of the Environment for Section 33 of the Fisheries Act.

In your capacity as chief of this unit, do you feel that the potential danger of the mine tailings in Alice Arm warrants the attention accorded it?

The Alice Arm issue is an interesting one to say the least. When the Amax issue is resolved, possibly with the completion of the scientific review panel's report, it will serve as a useful case history for the Department to analyze in terms of the Department's interactions with other agencies, primarily EPS, and the way decisions are made on major industrial developments. It is hoped a review of the entire process will help us to make well-informed decisions about similar mining developments or other industrial developments. I don't think a specific statement on the problems associated with the decision to allow the Amax mine to proceed would be either appropriate or necessary until the review is completed. A lot can be learned from the Alice Arm case history, and I hope it can be used constructively within the Department to illustrate where and how problems resulted, both internally and in terms of our relationship with outside agencies and the public.

You mentioned communications problems within the Department. Perhaps, since this is an internal newsletter, we should discuss those.

Well we could start with the district staff. I think we've had some problems with how district staff see what the Habitat Management Division does. In the past, there hasn't been sufficient attention given to drawing Habitat Management people from Vancouver together with the district staff so that we can examine and attempt to understand each other's problems and points of view.

Habitat Management has suffered from the organizational shifts within the Department in the last few years. For example, we were recently within the Resource Services Branch, closely aligned with the Habitat Research Section. Since then we have transferred to the Field Services Branch, although the research component has remained within the Resource Services Branch. Although we attempt to communicate as much as possible on major issues, the mere separation of branches makes it increasingly difficult to work together

Water Quality...

on a cooperative basis.

In terms of external communication, I think we have a problem with the public's understanding of who we are and what we do. The Water Quality Unit is one small entity within a vast govern-

"It's not easy for the public to comprehend our role."

ment network. Because there are other agencies involved with water quality issues, it's not easy for the public to comprehend our role within this network. The Department has to do a better job in communicating with the public.

What lies ahead for the unit?

The unit is facing some interesting yet difficult and challenging times. There are problems of overlapping jurisdiction with EPS and there is a need for clarification of the respective roles of each agency. There currently are numerous major industrial developments proposed in B.C., primarily in the mining and petrochemical sectors. The Hat Creek thermoelectric generating plant, for example, is a large development with potentially serious implications to the resource. A detailed review of that project, in concert with a number of other projects, will seriously tax the ability of the unit to effectively review developments and ensure the protection of fish habitat and water quality. Hopefully a "revitalized" Habitat force in the Pacific Region, a resolution to the DFO-DOE jurisdictional problems and the commitment of staff resources to deal effectively with the numerous water quality problems will result in effective strategies and mechanisms for dealing with water quality issues over the long term.

Phase II enhancement options sought

As Phase I of SEP is winding down, active preparations for Phase II are underway. Harold Swan, associate executive director of SEP, is directing a planning group charged with developing proposals for Phase II. Major inputs to this process will come from the Geographic Working Groups (GWGs) and a new subcommittee, called "Enhancement Opportunities," which is chaired by Chief Engineer, SEP, Al Lill, and Art Tautz of the provincial government. Members are: Jim Wild, Bruce Shepherd, Dave Marshall, and Bill Schouwenburg.

This subcommittee is in the process of assembling a list of all known opportunities for enhancing salmonids, from which a general Phase II plan can be assembled. All types of investments are being considered, including not only all the usual technologies now utilized by SEP, but also all quantifiable habitat restoration opportunities that can be identified.

The subcommittee has completed a first-draft appraisal of the Thompson watershed, and intends to proceed to all other areas of the province by early October. The opportunities will be reviewed and priorized by the GWGs by November 1. Suggestions for projects are welcome now. The subcommittee would especially like to know of any project possibilities that have not been identified in the bioengineering surveys to date.

Any good site prospects, such as groundwater sources, barriers to fish migration, unscreened intakes, cut-off side channels, marsh restorations, flow supplementation opportunities, colonization of underutilized habitat, and so on, can be brought to the attention of of any of the subcommittee members, in writing or by phone. Suggestions should take into consideration brood stock, water, land, and availability of services.

A copy of the current draft of the Thompson area report will be made available to those interested if they call Al Lill at 6629. This draft not only gives details of the Thompson, but provides an insight into the format being followed for all other areas.

Fighting danger with first aid

A review of what should be common knowledge

Yesterday I met with a person who, on his way to the meeting, came upon a major traffic accident. When he arrived on the scene, there were already six or eight people standing around not knowing what to do, and there were three injured people lying unattended, bleeding and, maybe dying. A person who had a CB radio in his truck hadn't even thought to call for an ambulance.

It struck me--what would I or anybody else do in that kind of situation? Would I have enough awareness to tell the person with the CB to use it? Would I remember enough basic first aid to be more of a help than a hindrance to the injured people?

I decided to review some basic procedures for my own enlightenment and thought I'd pass them along to *Sounder* readers. While these procedures are in no way a substitute for professionally taught comprehensive first aid courses, in the meantime they may help you to save a life--maybe your own.

Bleeding wounds

There are three basic lifesaving steps when treating bleeding wounds. In order, they are:

Stop the bleeding
Prevent or treat shock
Protect the wound

Easy to say, but hard to do?

Bleeding from a vein comes in a steady flow which should be controlled by: elevating the bleeding part; covering the wound with a compress and applying pressure; or exerting pressure on the sides of the wound, particularly the side between the wound and the heart.

Bleeding from an artery usually comes in spurts. It can be controlled by applying direct pressure to arteries. The key is to locate the proper pressure point: for leg wounds, use the femoral artery at the groin (where the lower abdomen meets the thigh), and for wounds above the legs use the brachial artery, which is found in the upper arm. Strong pressure applied by hand only, for up to 15 minutes, should control severe bleeding.

Apply pressure to the wound. (Illustration courtesy of St. John Ambulance.)

Fractures

Initially, when treating people who have fractures, remember two important points:

Prevent shock (keep victim warm and apply artificial respiration if casualty goes into shock and stops breathing.)
Prevent further injury (careless handling of patients with fractures can result in further injury.)

A fracture should be suspected if any of the following symptoms are evident: tenderness over the injury, with pain on movement; victim's inability to move the injured part; unnatural shape; or swelling and a change in skin coloration. A fracture may have only some of these signs. If you are not certain if there is a fracture, give the injury the benefit of the doubt and treat the patient carefully, as if he had a fracture.

Most fractures will require splinting which should be done by trained personnel, and as soon as possible; proper splinting relieves pain and helps to prevent further injury. It is very important to reduce the pain, because excessive pain will increase the danger of shock.

continued on page 16

First aid...

Accident victims often go into shock; the symptoms are pale or moist skin, a rapid, weak pulse, and unconsciousness.

Unconsciousness

Make sure the person is breathing. Use mouth-to-mouth resuscitation immediately if necessary.

An unconscious person lying on his back is in serious danger from suffocation. Examine for injuries which might have caused unconsciousness. (If bleeding is apparent, control that before continuing your search for other causes.) If back or neck injuries are not apparent and are unlikely, simply turn the casualty on his side with his face turned downwards, or on his stomach with his arms under his forehead. Make sure the mouth is open and airway clear.

Loosen any tight clothing and wrap the casualty in a coat or blanket to conserve body heat, but do not apply heat.

Never attempt to give any fluids or solids by mouth or leave the unconscious casualty alone. Keep a constant eye on his breathing.

Artificial respiration

Mouth to mouth (exhaled air) artificial respiration has been proven far better than any other method. It has saved more lives and it is easier to administer than most other methods.

Use artificial respiration as the fundamental first aid measure for victims of shock, or for heart attacks, suffocation, drowning, or other unknown causes, when respiration has stopped.

When breathing stops, it is always an emergency. The brain is the most sensitive tissue of the body; the results of an oxygen shortage become severe within a few minutes (usually about 3) after breathing ceases. Therefore, time is of the utmost importance. Those seconds do count!

Don't wait for oxygen or mechanical equipment and don't waste time moving the victim to the ideal location (unless he is more endangered in the present location). Treat the victim immediately, following the procedure listed below:

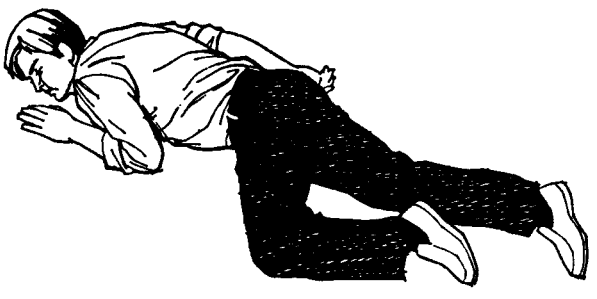
Tilt victim's head back and elevate chin to open airway. Pinch victim's nostrils shut with thumb and index finger to prevent air, which should be going into lungs, from escaping. Take a deep breath, and place your mouth around the victim's mouth, giving 4 quick breaths. Then,remove your mouth from the victim's mouth when his chest has expanded. Listen for air leaving the lungs, and watch the chest fall. Every five seconds give a breath. If the victim should stop breathing again, resume the breathing procedure until the victim is breathing on his own once more.

Mouth to mouth resuscitation may not be possible if the victim has serious head and face wounds; however, there are alternative methods that may be used: the back pressure hip-lift; the chest pressure arm-lift; or the back pressure arm lift. Learn at least one of these alternative methods, if possible.

A lot of this seems very complicated and difficult to remember, but the key is to remember the four lifesaving steps, which in order are:

check for breathing,
stop the bleeding,
prevent or treat shock,
protect the wound.

Al Wood,
Director of Regional Planning



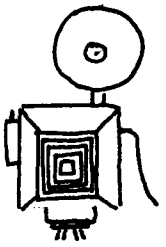
Proper unconscious position. (Illustration courtesy of St. John Ambulance.)

Announcing...

Yet another stupendous

Sounder Photo Contest

Open to all Department staff.
Win ~~big~~ prizes.
Have your photos put to use
in Department publications and displays.
Be the envy of aspiring photographers.



All you have to do is submit the best photo you've taken this summer and a panel of judges will select the three best photographs in each of four categories: people, fish and fishing, humorous and scenic photographs.

Enter now!

Slides or prints are acceptable, but entries in previous contests are not. Entrants are limited to one entry for each category.

Prizes will be announced in the September *Sounder*.

The contest closes October 15, 1981. Winners will be announced in the December issue of *Sounder*. Send all entries, with name and explanation attached, to:

Sounder Photo Contest,
10th floor
Department of Fisheries and Oceans
1090 W. Pender Street
Vancouver, B.C.
V6E 2P1

For further information, phone the *Sounder* at 687-1442.

St. John course a lifesaver

Early in July, twelve department employees from 1090 West Pender took the St. John Ambulance first aid course "Safety Oriented First Aid On The Emergency Level."

Instructor John McKinley led the participants briskly through the seven-hour course which taught lifesaving techniques and treatment for a variety of injuries. Participants learned the life sustaining techniques of administering artificial respiration by the mouth-to-mouth method; applying direct pressure to stop bleeding from wounds; and positioning the unconscious person to prevent suffocation.

In addition, employees learned how to give the following first aid at the emergency level: dressing wounds; treating shock; handling injuries to bones and joints; moving victims with head, neck or spinal injuries; treating persons who have fainted or gone into diabetic shock or insulin coma; and treating burns, scalds, and eye injuries.

John McKinley says that the most common office injury is a fall, and very likely next to that is the injury which occurs when people walk into or trip over things. These types of injuries are reason enough to

continued on page 18

St. John...

remind employees at HQ to use caution when going up and down the stairs, and especially when approaching the doorways. The heavy metal doors which open inwards into the stairwell are capable of causing a strong, crushing blow that could result in serious internal injuries. (Even brain damage!)

All the candidates passed the exam, and they will be awarded certificates. A list of personnel qualified in first aid techniques (along with their floor and telephone numbers) will be posted in the sick room (on the 8th floor), near the first aid kit.

Other qualified persons who wish to make themselves available for emergency first aid, especially Cardiopulmonary Resuscitation (CPR), may contact Art Chambers (8th floor, 666-1964) and ask to have their names listed also.

Everyone agreed it was a day well spent; all had learned a great deal, and some had whetted their appetites for even more training either at a higher, though related level, or in a completely different, more specialized area, such as CPR.

All Department districts should assess their safety training needs and contact either the St. John Ambulance in their community or Brian Richman, Field Services Branch training officer (666-1287), if they wish to have staff trained, upgraded, or updated. (Methods are constantly changing; some treatments which were acceptable only a year or two ago are now very definitely outmoded, or even dangerous!)

Linda Jamieson
Bio-Science Planning Assistant to Director of Regional Planning

"Assault" on crime

A young woman was recently attacked from behind in a parking lot located near Pacific Region headquarters. The time was five o'clock in the afternoon.

This incident initiated a seminar on attack awareness for all interested women at 1090. Conducted by the Community Relations Branch of the Vancouver Police Department, the seminar was attended by 135 Fisheries women.

In his 1½ hour presentation, Constable Brian McNulty covered such topics as purse snatching, assault prevention, abusive phone calls, apartment security and weapons, along with a fifteen minute film in which rape offenders and victims were interviewed.

Constable McNulty pointed out that strangers account for only about 15 percent of assaults. Casual friends and business associates make up 35 percent and the largest and most likely category, casual dates, makes up the remaining 50 percent.

Preventing any kind of assault was given the most attention. Key points were:

- BE ALERT AT ALL TIMES,
- avoid deserted areas especially in taking shortcuts,
- hang up immediately but gently for obscene phone calls,
- install a peephole in your front door and never open the door without first knowing who is there,
- keep all doors and windows locked;
- have door and car keys ready before you need them
- don't hitchhike or accept hitchhikers,
- keep your car in good running order with plenty of gasoline,
- if you suspect a person or vehicle is following you, don't lead him to your home. Go to a restaurant and/or contact the police department,
- be wary of acquaintances you have just met who offer you a ride home.

Here's what to do if you are attacked:

- don't carry a weapon; it could be used against you,

- tell him you are young (17-18) or that you are pregnant or that you have VD, or some other plausible excuse,
- treat the rapist as a person, gain his confidence for the moment that you can safely make a move to escape,
- if all this has failed, offensive action is recommended only if the assailant is unarmed.

Assault awareness programs are at present limited to those constabularies with sufficient staff, namely Vancouver, and Victoria's "Island Rape Prevention" which will send speakers to interested groups on northern Vancouver Island.

Gayle Crouser,
Assistant Editor

Pat Phillips is on holiday. Her column, What You Can Expect, will be in September Sounder.

Spurious emissions

New staff in Inspection includes: Sinclair Aitken, sampling officer, fish inspection, Vancouver; John Pynn, assistant district insurance supervisor, Victoria; Vance McEachern, as fish quality specialist, Prince Rupert.

* *

Fishery Officer Tim Young has transferred from New Westminster to Duncan.

* *

Elaine Antilla, clerk in Travel, is leaving the Department on August 14 to move to Port Alberni.

* *

Cindy Brown was treated to a gourmet farewell luncheon at The On On in Chinatown by SEP staff. (Photo courtesy of Don Radford.)

John Greenlee stands with retiring district supervisor for Kitimat, Ed Christiansen, at farewell party on June 10, 1981. (Photo courtesy of Bern Hawley.)

Ron Tarves, formerly an instructor with Douglas College, has won a one-year consultant contract to examine internal and external regional information needs. Ron will be reporting to Assistant Deputy Minister, Doug Johnston.

* *

Editor's note: due to an error by one of our sources, the Sounder *of June, 1981, incorrectly identified Captain Barney Ogmundson as one of the new masters of the FPV "James Sinclair." The editors wish to apologize for the error and any inconvenience it may have caused Captain Ogmundson or the Ship Division. We wish both Captain Ogmundson and Captain Gosse success in their new commands.*

Spurious...

Recent departures from the Department include: Bob Robertson, senior engineer, Habitat Management Division, who has accepted a job in Saskatchewan where he will be working on construction of a hydro dam; Cindy Brown, economist, SEP, who is moving to Victoria where she will work for the provincial government; Ken Campbell, chief, Facilities Management, who has accepted a new position in Program Administration in the newly formed Gulf Region at Moncton; Donna Davies, clerk, Facilities Management, who has gone into private business, and Bruce Taylor, fishery officer and investigator, who has resigned from the Department.

* *

Harold Swan has been appointed Associate Executive Director of SEP.

* *

Gordon Ennis joined the Department as senior biologist, Water Use Unit, on July 6. Gordon comes from the Department of Environment.

* *

A baby boy, Jason, weighing 7 lbs. 4 oz., was born June 20 to Lou and Shirley Long. Shirley is district clerk in Kitimat.

* *

A daughter, Brenda Lynn, weighing 8 lbs. 4 oz., was born June 21 to Shirley and Brian Murray, south coast relief master.

* *

A 9 lb. 5 oz. daughter, Katherine Dawn, was born July 14 to Peggy and Ron Paziuk, relief master, Kitimat II.

* *

Peter Delaney, biologist, has joined the Land Use Unit, Habitat Management, effective July 15. Peter was formerly working for a private consulting firm.

* *

Sharon Henderson has been appointed acting chief, Computer Services Division, while Harry Hsu is away on extended sick leave.

* *

Successful candidates in recent competitions for district supervisor are: Kip Slater, who moves to Nanaimo, and Don Aurel who has been promoted upwards in New Westminster.

* *

Eric Kremer has been announced as director, North Coast Operations, effective August 1, on a two year appointment under the Interchange Canada Program. He comes from a position as general manager of the Central Native Fishermens' Coop.

The icemen cometh

An early team of provincial and federal fisheries biologists and native guides chopping through thin ice on Kamloops Lake in the winter of 1923. Photograph is from an album recently reproduced for use in Department literature and displays. If you have anything to contribute to the Sounder, *remember, the next deadline is September 1. We depend on staff contributions.*

(Photo by Givenchy.)

SOUNDER

Newsletter of the Department of Fisheries and Oceans, Pacific Region

Volume IX Number 6 September 1981

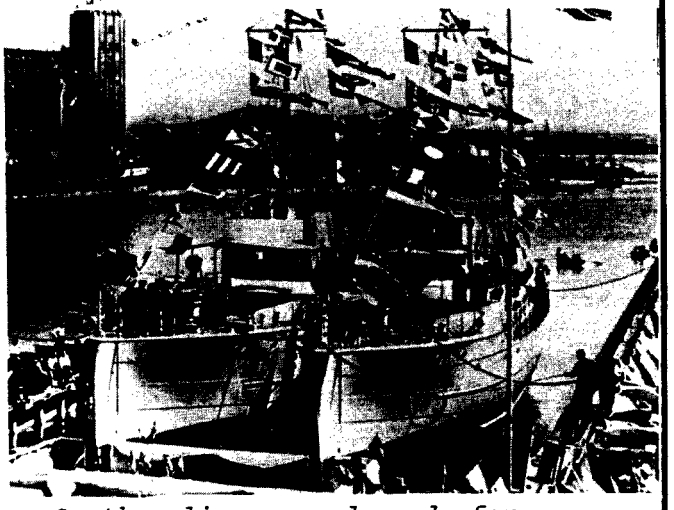
Finished With Engines

At 1555 hours, July 24, 1981, the ship's telegraph rang "Finished With Engines" for the last time in the long and memorable career of the Fisheries Patrol Vessel (FPV) "Howay." Earlier that morning, she had sailed from Victoria harbor to the New Westminster Marine Depot after exchanging whistle blasts with the spanking new "FPV James Sinclair," bringing Victoria residents to their apartment windows to see what was going on and to wave farewell to one of the most famous little ships on the B.C. coast.

The "Howay" was built in 1936 for the marine section of the RCMP by the Morton Engineering and Drydock Company of Quebec City. She was christened the "RCMPV Macdonald" by Lady Macbrien, wife of the RCMP Commissioner Sir J.H. Macbrien, and in a dual ceremony on August 20, 1936, slid into the waters of the St. Lawrence River with her sister ship, the "RCMPV Laurier."

Like many ships of her day, the "Macdonald" was designated for wartime service in the Royal Canadian Navy. In 1939, she was given a coat of olive drab, and she steamed south through the Panama Canal to her new home port of Esquimalt, B.C. In 1946, reunited with her sister ship after Captain Lor Shephard sailed the "Laurier" to the west coast, the "Macdonald" was renamed the "Howay," and the two ships became Fisheries patrol vessels.

The name change, from "Macdonald" to "Howay," was probably intended to familiarize people on the west coast with the new vessel, for a more respected name could not have been chosen. William Frederick Howay (1867-1943) grew up in New Westminster, travelled by wagon to study law at Dalhousie University and later became a prominent New Westminster judge. As an academic, his contributions to the written history of this province are nothing short of astounding.



On the slipways and ready for launching, the RCMP vessels "Macdonald" and "Laurier" begin their careers with fanfare in Quebec City, almost half a century ago.

The "Howay's" first Department master was Captain Redford, and her list of masters since that time reads like a who's who of old time Fisheries men... Earnshaw, Walker, McLellan, Gay, Furlong, to name a few. It was a pleasurable discovery to find that my wife is related to the first and last Fisheries captains of the "Howay": Captain Redford and myself.

Since 1947, the "FPV Howay" has been a familiar sight along the B.C. coast, from Victoria to the Alaska border, and also into the Bering Sea on halibut patrols in the 1960s. Her many duties

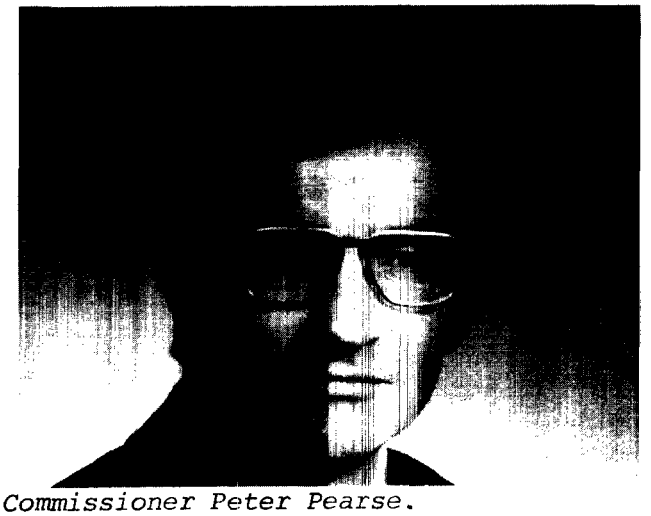
continued on page three

Pearse gets Department submissions

As many of you are probably aware, Dr. Peter H. Pearse, Commissioner of the Commission on Pacific Fisheries Policy, has been hearing submissions concerning the condition, management, and utilization of Canada's Pacific Coast fisheries. The importance of the Commission and its findings cannot be overemphasized, and therefore I would like to bring you up-to-date on its progress.

On January 12, 1981, Dr. Pearse was appointed as Commissioner to make recommendations to ensure that the public's interests are protected in the legislation, policies, procedures, and practices which affect both the management and the use of the fisheries resource. Two preliminary public meetings were held in February to explain the aims and procedures of the Commission. Regular public hearings are now being conducted; submissions from the general public, industry, and government are being presented.

Numerous submissions have already been presented, although to date, little has been heard from the Department. This article is to inform you that our silence is not an acceptance of guilt, an omission of ignorance, or a lack of having something worthwhile to say.



Commissioner Peter Pearse.

Dr. Pearse requested the Department to present submissions on licencing, enforcement, recreational fisheries, habitat protection, the Salmonid Enhancement Program, native fisheries, and research. These submissions have been prepared. The licencing submission was presented to the Commission on July 31, and after an August break, the remaining Departmental submissions will be presented. The Department's submissions are limited to a reporting of past and current situations; as such, the Department is not (nor should it be seen to be) recommending changes to the Commission, thereby influencing the Commission's recommendations.

Departmental submissions to the Commission will be printed as a single volume and made available to interested staff members after all submissions have been presented.

Al Wood
Director of Regional Planning

SOUNDER
Newsletter of the Department of Fisheries and Oceans, Pacific Region.

Editors: Maxine Glover
Mike Youds
Assistant Editor: Gayle Crouser

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1090 West Pender Street
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Phone: 687-1442

Sounder is printed eight times a year for the staff of Fisheries and Oceans. Opinions expressed in the *Sounder* do not necessarily reflect policies of the Department of Fisheries and Oceans. No articles may be reprinted without the editor's permission.

Correction

An error was made in the July-August issue of the *Sounder*. On page three, in the left-column letter addressed to SEP Community Advisor Joe Kambeitz, a young student, named Bryan, was incorrectly identified as Community Advisor Bryan Allen. Bryan Allen was not working on the project, and we apologise to him for the mistake and for any misunderstanding created by it.
-Editors

Finished With Engines

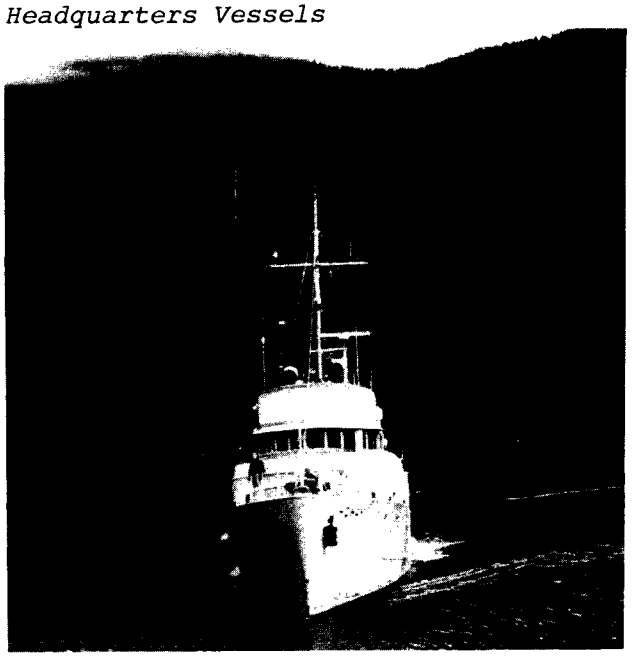
continued from page one

included enforcing fishery regulations, transporting fishery officers to isolated areas, regularly participating in search and rescue duties and assisting in the conduct of both inshore and offshore fisheries.

There are few coastal communities at whose dock she has not tied up. Very few bay and inlet waters have not been parted by her bow. How many young seamen made their first trip to sea on her and stood nervously at her wheel for their first watch, and how many of those young men went on to become masters of their own ships, we will never know. It was a regular occurrence at the dock in Victoria to meet an old-timer who had sailed on her 20 or 30 years previously. Sometimes it seemed as if half of Victoria had put in time on the old "Howay."

After 45 years of service to Canada, she will be sadly missed by all who sailed on her and all who came to recognize her familiar silhouette along the coast of British Columbia.

Captain Roger Myerscough
Relief Master
Headquarters Vessels



Approaching a total plan

An interview with Water Use Unit Chief Rod Bell-Irving

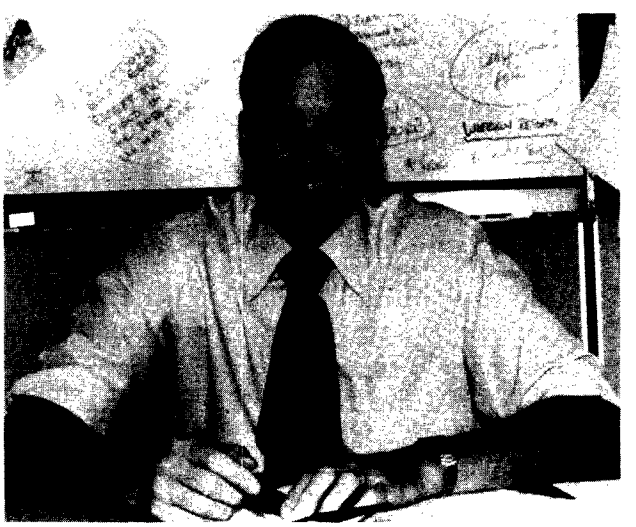
What is the function of the Water Use Unit?

The Water Use Unit is responsible for the technical assessment and resolution of problems of a large scale nature as they relate to the application of Sections 20, 28, 31 and 31.3 of the Fisheries Act.

The primary activities of the Unit relate to impact assessments: association for utilization and compensation relative to hydroelectric generation, water diversion for municipal and industrial use, foreshore development in the marine and estuarine environment, marine, harbour and port developments.

How many staff members are in your Unit?

Seven working in the Foreshore Section, seven with hydro/minimum flow. Three of the hydro/minimum flow positions are filled by professional engineers who concern themselves mainly with intake screen specifications and design, hydroelectric developments and operations, and resource maintenance flow determinations.



Water Use Unit Chief Rod Bell-Irving.

Water Use...

How much effort is spent on monitoring water levels?

As stated earlier, usually seven person years are committed to this activity. Small scale irrigation screening design matters are dealt with in a systematic manner. Plans are reviewed, design specifications are developed, and on-site inspections are conducted. Our involvement in the review and assessment of hydroelectric developments involving large scale dams and diversions can, and presently does, consume a considerable amount of time and effort. Usually through well established liaison networks, the Department and Unit are made aware of development proposals early in their planning stage; sometimes as much as five years in advance of the target completion date. Unfortunately, most of these proposed developments presently before us (e.g. Iskut-Stikine, Liard River) are now situated in areas for which we have little or no resource data on which to base an impact statement, nor do we have the resources to go and get any new information. As a result, we find ourselves having to assess the impacts of proposed developments using resource information provided to us by consultants to the proponents. Finally, an activity that has been a bit of a sleeper for a number of years appears to be growing unmanageable in terms of demand on our resources: resource maintenance flow determinations. For several years this section of the Unit has been plugging away at determining minimum flows for only a few critically water-short or artificially controlled creeks and streams. Once these are determined, we attempt by various means to secure an adequate flow of water in the system to ensure the protection of the fisheries resource.

Recently, the provincial government Planning Branch of the Ministry of Environment embarked upon a program wherein they are developing river basin management plans. On completion, these plans are to provide a framework, almost a road map, from which future water allocation decisions will be based. Unfortunately, at present we do not have the people, dollar resources, time or information to adequately respond to the opportunity to participate in these initiatives.

"If we are to keep pace with provincial initiatives and participate fully in the planning, we must strive to make more efficient use of our present resources and secure substantial additional resources."

At least five basic plans are being developed this year with indications that another eight will be developed next year, and yet we are able to muster resources and information to contribute to only one of this year's exercises, the Nicola River Basin.

In the future, if we are to keep pace with these initiatives and participate fully in the planning, we must strive to make more efficient use of our present resources while at the same time securing substantial additional resources.

What about the Foreshore Section? What are its concerns?

Not unlike the Freshwater Management Section, this one is finding increasing difficulty keeping pace with the level and intensity of activity being heaped upon us. There is at present no end in sight to the number of referrals, habitat determinations, impact assessments, reviews and meetings being handled by this group. Most of this activity is reactionary in nature; review and comment on development proposals as they are presented. Often the proponent has already invested considerable time and dollar resources in the proposal before presenting it to us for review. Almost always the final outcome of our assessment and review is that a modified proposal can proceed to development, and the fisheries-associated habitat base suffers a loss. Personally, I find this a very unsatisfactory approach.

On a more cheerful note we are

experiencing a change in approach as it applies to estuary development proposals; I am referring to our Cowichan, Nanaimo and Squamish Task Force work. Basically, we participate in these multi-agency, intergovernmental land use planning exercises as they develop long-range land use plans for the estuary. The approach is to designate highly sensitive areas within the estuary as preservation and conservation areas while at the same time indicating to industries the area, that from our point of view, could be developed in the future. By following this approach, we not only secure the long-term future of highly productive areas such as estuaries, but most importantly, we provide direction to industry as to where they might proceed with development while at the same time not significantly affecting our resource. We are presently engaged in a similar but much more complex planning exercise on the Fraser River estuary.

In an area so heavily developed as the Fraser do you foresee a situation where the Department must say "no more development"?

It depends on how you define development, but no, I don't think we ever said "no more development." I say that it in one breath, and yet in the next I say that at some time in any given area, particularly our estuaries, there has to be a bottom line below which we must not sink. There are foreseeable limits to the land and water area available in our estuaries. Before considering further permanent alienations in these areas, we must encourage present industry to make more efficient use of what they now have while at the same time encouraging future industrial developments to locate elsewhere.

"There are foreseeable limits to the land and water area available in our estuaries."

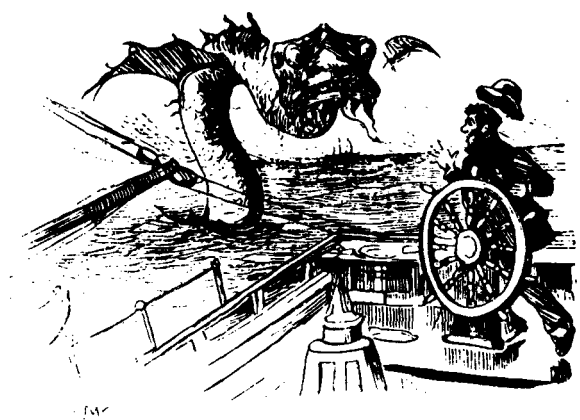
It was apparent during the Nechako controversy that the various levels of government and private industry were involved in an ongoing conflict, and with the increasing scarcity of resources, this conflict would only grow. Can resolutions always be found?

Resolutions can always be found, almost always at a cost, but they can and are being found. A good case in point which is now history is the Nanaimo estuary, where we had a resource conflict involving log storage and productive fish habitat. Resolution was possible only after the forest industry involved took a long, hard look at their real needs, and in doing so discovered a flexibility in their methods of operation which perhaps had been there all along. The result was a greatly reduced demand for log storage space and an improved fish habitat base.

Anything new on the horizon?

The *Sounder* depends on staff contributions. The deadline for the next issue of the newsletter is October 15. We would like to hear from you. Please send all contributions to:

Sounder,
c/o Maxine Glover,
10th floor,
1090 W. Pender Street,
Vancouver, B.C.
V6E 2P1



The in-stream newspaper

SEP gains full-scale media involvement

Over the past couple of weeks I have had a number of Department staff ask me "what is going on with the *Vancouver Sun?* Are they starting their own enhancement program?"

The answer is "yes." The connection between the Department and the *Sun* is through the Public Involvement Program of SEP. The newspaper's project is one of about 130 PIP projects that involve individuals, schools, industry and interest groups. Save the Salmon is, however, our first project involving the media.

In a nutshell, what the *Sun* will be doing with the Save the Salmon program is promoting a coordinated salmonid educational program with the North and West Vancouver school districts. To do this, they will be raising funds through corporate and individual donations for school projects. The money will be used in two localities: 1) North and West Vancouver, for such items as incubation boxes, spawning gravel, stream clean-up and a "Heath" tray stack to be maintained by the Capilano hatchery staff, and 2) the North Shore Outdoor School at Paradise Valley on the Cheakamus River, where a mini-hatchery with a capacity of 100,000 chinook smolts will be built.

The target is to raise $50,000. One half of the funds will go to North and West Vancouver projects and the rest to the mini-hatchery.

Why bother with the North Shore streams when so many of them have been devastated by urban development? Well, the answer lies in the educational value of the program. There are approximately 20 streams of varying size between Horseshoe Bay and Deep Cove. I hope to have hands-on projects on 15 of them within two years. The numbers of fish produced will never amount to much in relation to the overall stocks on the coast--perhaps 3,000 adult coho, 2,000 chinook, and 1,000 chum. We will, however, encourage an awareness of the

The Vancouver Sun

resource, and it is impossible to put a dollar value on that.

The involvement of the *Sun* enables me, as a community advisor, to promote enhancement on a large number of streams on a coordinated, rather than an ad hoc basis. It also gives me a more flexible financial budget to draw from. Suddenly, it is feasible for me to recommend spending money on projects that would not stand up to a cost-benefit analysis if only SEP funds were used. Because of this program, there will be salmon returning to such creeks as Cypress, Nelson, Eagle and Myrtle Creek. ("Myrtle Creek? Where the hell is that," you ask? Near Deep Cove, it happens to be a small, insignificant trickle that has been badly abused in past decades. Very soon it will have coho in it again.)

The showpiece of the program will be the chinook mini-hatchery on the Cheakamus River. The hatchery will comprise small buildings complete with two marking stations, wet lab, pumphouse, wellwater, aeration tower and four Capilano-type troughs.

Every grade six student in North Vancouver attends the North Shore Outdoor school for approximately one week. In addition, a large number of students from New Westminster visit the school each year. In total, approximately 3,000 students will be involved in a hands-on learning experience each year!

This fall, it will not be possible to incubate chinook eggs, as construction is only beginning. Instead, a small number of coho and chum eggs will be incubated later in the fall to test the system.

School staff living on-site will receive crash fish culture training through the PIP and also from the Tenderfoot hatchery staff, who have volunteered to help when it is needed.

I would also like to mention that the idea was partially the brainchild of the Pacific Salmon Society. After initial discussions with me, the Society convinced the *Sun* to take on the media-sponsored program. *Sun* executives were already impressed with SEP and its volunteer work,having read in their paper about the public involvement program on Quadra Island. That project, the April Point Flyfisher's hatchery, was jointly initiated by Community Advisor Bob Hurst and April Point Lodge Owner Warren Peterson, and led to a full-page story in the *Sun* Outdoor Section.

The *Sun's* obvious connection with salmon is through the annual *Sun* Salmon Derby. For the past 43 years, the *Vancouver Sun* derby was feature entertainment each summer. During the days of plenty, nothing was thought of stringing up a large number of trophy-size "springs." Times change. The fishermen who have participated for many years have seen the fish get smaller and fewer in number. The *Sun* is continuing its derby, but at the same time is helping to restore the resource. In many ways, the *Sun* is like a sport angler, who utilizes the resource yet also represents a portion of the general public willing to volunteer time, money and effort to ensure the future well-being of the resource

One other thought: I wonder if the fact that *Sun* Publisher Clark Davey and the senior members of his promotion department are ardent sportsfishermen had something to do with their decision to "put a little back?"

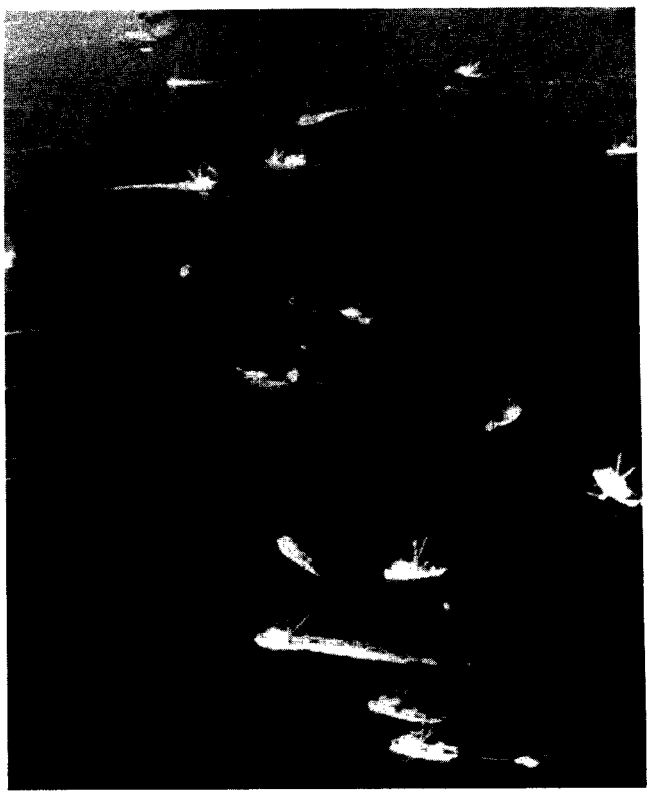
Bryan Allen
SEP Community Advisor

Impoundment film available

The 1981 experimental herring impoundment fishery has been documented in a half-hour film report now available for use with the fishing industry.

The film was coordinated by Bob McIlwaine and Lloyd Webb of the Fisheries Development Division and was produced by Dick Harvey and Telesound Studio. Herring impoundment is an experimental method of harvesting roe herring on the B.C. coast. Impoundment, which involves the "herding" of hundreds of tons of herring into protected bays that are sealed off with nets, increases the quality of the herring carcasses and extends the otherwise brief period of the roe fishery. The film is intended to introduce the new method to the fishing industry and to Fisheries management.

"We've already shown it to some of the seineboat skippers who then changed their minds about impoundment," Bob said.



Hectic herring roe fishery at Skincuttle.

Dual benefits from COSEP jobs

This year they were students. Next year they may be employees.

Frances Lefcort, Debbie Howard, George Borchert and Nancy Richardson are four students who worked this summer for the Resource Services Branch of the Department of Fisheries and Oceans. They were hired through the federally-funded Career Oriented Summer Employment Program (COSEP) and worked in the West Vancouver laboratories.

Thirty other COSEP students worked for Resource Services, most of them at the Pacific Biological Station in Nanaimo. The program allows students to get practical experience in areas related to their field of study. The department will benefit by having trained and well-rounded candidates for future jobs in Fisheries and Oceans.

The four COSEP students at West Vancouver laboratories discussed their summer jobs and the pros and cons of the employment program.

Frances Lefcort is going into her fourth year of biology at Smith College in Massachusetts, USA. At the West Van lab, she worked with two different research groups.

In one group, she did chemical analysis of fish tissue and diet. She measured the fat, protein, mineral and moisture content of fish which have undergone research studies. The tissue of fish from different ponds, subjected to different conditions, were compared.

Frances Lefcourt, COSEP researcher.

"We use the results of analysis to help figure out the state of health of the fish," Frances said. "We found that in certain density studies, smaller fish raised in crowded conditions had less protein and more moisture than was normal."

In the endocrinology laboratory, Frances checked the levels of certain hormones in fish used in other studies. She examined the cortisol hormone and two hormones secreted by the thyroid gland and correlated the hormone levels with the general well-being of the fish.

"This is good laboratory experience," Frances said. "I'm getting the lab techniques down."

"I'm interested in neuroendocrinology and how it affects behavior," Frances said. After obtaining her bachelor of science degree, she plans to write her master of science thesis on either neuroendocrinology or neurophysiology in a marine organism.

Work broadens studies

Debbie Howard is doing her master's degree in pest management at Simon Fraser University. Like all COSEP students, Debbie worked under the direction of a supervisor. At the West Van lab, she conducted stress studies, mostly on herring, but also on salmon and trout.

Stressful conditions were created in the laboratory by crowding the fish or injecting them with chemicals. After examining the reaction of the interrenal cells, Debbie compared results from different density experiments and different strengths of chemicals.

Debbie said that she learned a great deal from her job. She especially liked the field work and thought there should be more of it.

Debbie hopes to work for the Department again next year and to get on a new research project at that time. She felt her job had helped her to broaden her academic studies.

"I'm branching out because of the job," she said.

Nancy Richardson is going into her fourth year of Animal Science at the University of British Columbia. She work on a protein energy study with chinook salmon. The purpose of the study was to find the level of protein which produced the largest fish in the shortest possible time.

"I feed them by hand and keep track of the food consumption and from that the protein consumption," Nancy said. Her job also involved keeping graphs and growth charts as well as collecting and analysing faeces to examine how nutrients were being used by the fish.

"The work is definitely relevant to my studies," Nancy said. "I did it last summer and I wanted to come back." The study is in its third year.

"I think I'd like to come back next year," she said. The attraction next year for Nancy is a feeding experiment studying the diet of salmon. The study is related to the recent incidence of cataract blindness in hatchery-raised salmon.

George Borchert is an aquatic ecologist. He graduated from the University of British Columbia this year with a bachelor of science degree in zoology. He will continue university in the fall, picking up more courses in zoology and then starting his master of science in fisheries population dynamics.

George works with a group doing lake enrichment studies. The group looks for lakes suitable for fertilization, a process which boosts sockeye salmon populations.

George Borchert at West Van lab.

George spoke of high morale amongst the members of the lake enrichment team.

"They really do a lot of work in the field and in the lab. I'm really impressed," he said.

Improvements suggested

Although full of praises for the employment program, the students had ideas on how it could be improved. Nancy and George said that COSEP was not well-publicized at UBC and that it was difficult to obtain information on it. George suggested that professors be informed "because a lot of students didn't know about COSEP."

Frances and Debbie would like to see more opportunities to meet with other students, biologists and scientists working on different research projects. They suggested that students be given the opportunity to work on a number of different projects throughout the summer.

Debbie wanted more working field trips for stationary lab workers. Frances noted that if the purpose of the program was to give students a broad base of experience, then it would be to the benefit of the Department to generate interest in the different research opportunities available.

Susan Alexander
COSEP
Information Branch

Teaching tips for fishery officers

METHODS OF PRESENTATION

This is the last in a series of three articles prepared by Linda Bermbach, SEP education consultant, for use by fishery officers and other staff who are called upon to teach school children.

1. FILMS

There are several excellent productions available through Fisheries Information. Some of the more highly recommended are: "Living River," "Fisherman's Fall," "Estuary," "B.C.'s Famous Canned Salmon," "Salmon River." Others on specific topics include: "Birth of a Salmon," "Fragile Web," "Life of the Sockeye Salmon."

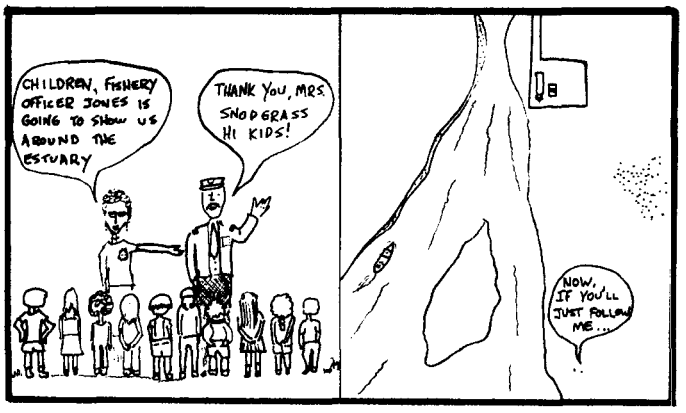
Salmonids in the Classroom, the SEP education package, contains the complete catalogue and individual film guides for each presentation.

Tips on film presentation

a) Preview the film.
b) Allow for time at the beginning to introduce the film (explain difficult words) and time at the end for questions or discussion.

2. LECTURES

With young children, your talk should be as conversational as possible. Maximum attention span for elementary kids is 15 minutes, without a break.



TEACHING TIP #3: FIELD TRIPS CAN BE ONE OF THE MOST REWARDING TEACHING EXPERIENCES.

Tips on lectures

a) Have a good variety of high quality audio-visual aids (pictures or transparencies).
b) Vary your presentation using a combination of blackboard, flip chart, overhead transparencies or slides.
c) Walk around and ask questions. Don't just stand behind a lecturn or desk.
d) Use local or site-specific examples to illustrate your points.
e) Use anecdotes from your own experiences. Interject with humourous sidenotes.

3. DISCUSSION

a) Keep the questions on track. With little kids you will need to rely on the teacher sometimes to redirect their wandering questions.
b) Ask for questions to be submitted in advance if you are nervous about fielding questions. This is particularly important if you are dealing with a controversial local issue.
d) Introduce the discussion topic using such techniques as brainstorming, simulation, dilemma situations or hypothesizing.

4. FIELD TRIPS

These are probably the most rewarding teaching experiences, but field trips can have disastrous results if they are not well planned.

a) Meet with the teacher well in advance of the outing.
b) Discuss with the teacher his/her plans for classroom presentation. The students should have some background knowledge, a clear idea of why they are going on the field trip, rules and regulations governing their conduct and a list of all materials (clothing requirements, pen and paper) that are necessary for the outing.
c) Make sure there will be adequate transportation and supervision.
d) Walk the site prior to the student outing.

Linda Bermbach
Educational Coordinator

Manual deserves more attention

From abalone licenses to warrants of committal, and from the size and stock number of a petty officer's gabardine raincoat to national policy and sections of the Criminal Code relating to the use of firearms, the Operations Manual is an invaluable reference book for Field Services fishery officer staff. Tom Moojalsky, chief enforcement officer, doesn't know why the manual, introduced by the Regulations and Enforcement Division in 1978, has been overlooked by so many staff members.

"The manual was discussed by management and approved by Ron MacLeod (former director of Field Services). The premise was that all policy--national, regional, division, district and marine policy--would be developed and incorporated into the operations manual, but no one followed through with it except the Marine Division and Regulations and Enforcement."

Copies of the manual were distributed to all district offices, subdistrict offices, division chiefs and unit chiefs. Designed for quick and easy reference, and with color-coded policies in alphabetical order, the manual can be compiled to meet the exact needs of each district, unit or division within the Department. As new policies are formulated and established at the various levels, they can be sent to Tom, or Tinker Young, chief of the Regulations and Enforcement Unit, for processing and incorporation into the manual. Since few policy additions or changes have been made, it is clear the manual is not being used to its fullest potential, Tom says. He is still receiving calls from staff members with questions that are answered in the manual.

"If you receive a circular, you may stick it in a file and forget about it, but with the manual, all this information is readily available."

Mike Youds,
Co-editor

Our own Team Canada

As the trawler "Ivan Malyakin" waited 20 kilometres off the Canadian coast to rendezvous with a processing ship, Soviet fishermen and the crew of the "FPV Laurier" gathered for an informal volleyball tournament on August 2. The Canadians lost all three "national" games, after which mixed teams were formed. At left, Captain Harry Connors of the "Laurier" stands with trawler's Communist Party member. Below, a team shot.

Resource Boards revise purpose

Resource Boards. What are they and what do they do?

Resource Board is a fancy title for the regional planning groups established to recommend policies and strategies for management of the fisheries resource. The four Resource Boards--Salmon, Herring, Groundfish and Shellfish--were established about five years ago by the first Regional Director-General, Dr. Glen Geen.

As the titles indicate, the Salmon and Herring Resource Boards focus on salmon and herring. The Groundfish Board deals with all usable species of marine fin fish except salmon and herring and the Shellfish Board is responsible for shellfish, marine invertebrates and marine plants.

Each Board has seven to ten members representing all branches involved in management of the resource, and members are generally drawn from senior working levels within the branches. The current Board chairpersons are:

Herring- Bob Humphreys, regional herring coordinator, Field Services Branch.
Groundfish- Ed Zyblut, chief, Offshore Division, Field Services Branch.
Salmon- Rod Palmer, director, Policy, Planning & Program Development.
Shellfish- Ian Whyte, head, Marine Plant Division, Technology Branch.

Initially, the Boards were involved primarily in annual reviews of program proposals to advise the director-general on work plans and budget allocations. Since recommendations could influence budget and staff allocations to branches, Board members became proponents for their branches and generally were unable to agree on the distribution of available funds. Also, since each Board did a hard sell on its sector, the requests for staff and money always exceeded the available supply. It was concluded that budget allocation was more properly the job of the director-general and the Regional Executive Committee of branch directors.

Early this year, the terms of reference for Resource Boards were revised and are now as follows:
"The Board will recommend as appropriate to the director general, Fisheries management, through the director of regional planning on programming and policy to optimize Pacific region fish production, utilization and value, by:*

- developing and proposing long and medium range policies and goals;
- reviewing and recommending on policies and strategies for fishery and habitat management, enhancement and research.

**The SRB Chairman will also report to the executive director of SEP.*

A Board will consist of a chairperson and members appointed by the director general (except for the SRB, which is appointed by the executive director of SEP). All relevant branches and other designated Pacific region fisheries management groups, as required for the conduct of the Board's work, will have a member on the Board. A member will be authorized to represent his/her branch. The Board, through its chairperson, will be authorized to seek information and assistance from other regional staff on an ad hoc basis."

The work of the four Boards is coordinated through Al Wood, the director of Regional Planning.

Recently, the Boards have concentrated on development of long-term fish production objectives and on alternative strategies for future management of the fishery. For example, tentative overall regional objectives for salmon and shellfish are stated as follows:
"To increase the annual catch of salmon from the current level of 68 million kilograms to 168 million kilograms by the year 2000, through a program of conservation and enhancement, and to generate the best mix of social and economic benefits from this increased production."
"By the year 2000, to increase the annual catch of shellfish from the 1980

level of 9,464 tonnes to 28,090 tonnes; to attain a wholesale value of $93 million from a landed value of $59 million through a developmental program dedicated to optimum utilization of the resource; and to provide the best combination of social and economic benefits to the region."

The other Boards are developing similar objectives. The broad objectives are followed by a variety of sub-objectives and alternative strategies. Boards are currently testing the objectives (whether they are attainable and desirable, for example) and determining actions required over the next few years. The Boards will then present proposed objectives and recommended strategies to senior regional management. Alternative strategies will be discussed with user and interest groups, and decisions will be taken on appropriate actions. Objectives and action plans will then be presented through the Department's planning and budgeting system.

Rod Palmer, Director
Policy Planning and Program Development

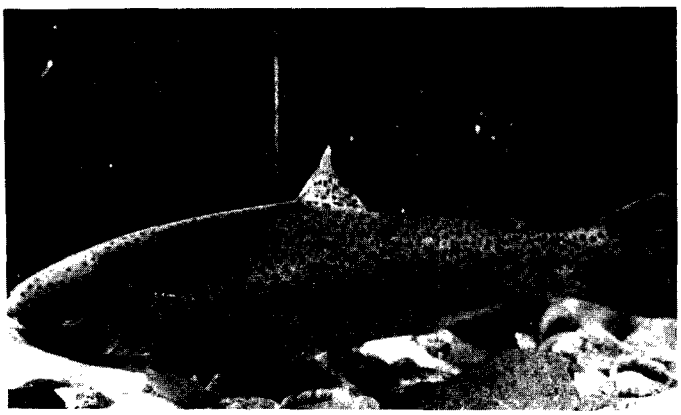
Improvement projects announced

Eleven fish and wildlife improvement projects throughout the province have been established with the first grants provided by the provincial government's Habitat Conservation Fund.

B.C. Environment Minister Stephen Rogers announced the new projects recently and said they have marked the beginning of a new era in fish and wildlife conservation in the province.

"These eleven projects mark the first application of the Habitat Conservation Fund to restoring and enhancing fish and wildlife populations through habitat work," Rogers said. "All eleven are high priority projects and all have been made possible by this funding arrangement."

The Habitat Conservation Fund was recently established with a $1.25 million annual grant from the Provincial Crown Land Fund for land acquisition and the creation of a hunting and fishing licence surcharge to generate funds for ongoing management.



Rainbow trout; enhancement planned.

With a total allotment of $508,000 the eleven improvement projects include:
- a spawning channel at Redfish Creek near Nelson to restore the famed Kootenay Lake kokanee fishery;
- an aeration project to eliminate winterkill of resident trout in seven lakes near Kamloops;
- four projects for the improvement of wildlife habitat through controlled burning, which promotes regrowth of vegetation better suited to feeding by wildlife;
- a project to improve rainbow trout spawning areas at Weaver Lake, near Chilliwack, through placing of spawning gravel and construction of a fish ladder;
- a second spawning area project in the Cariboo-Chilcotin Lakes area, involving both stream clearance and gravel placement;
- the construction of public waterfowl viewing areas and wetland habitat improvements at Serpentine Marsh, near Cloverdale, and;
- the development of an overall management plan to coordinate a number of conservation agencies working in the Columbia Marsh area near Golden.

"Initially, the habitat enhancement work will be based on revenue from the licence surcharge," Rogers said. "However, the fund will also be able to accept individual donations and bequests in the future, and we expect that a broader group of British Columbians will wish to contribute to the important work."

Spurious emissions

A welcome is extended to the following people who have joined the Department: Gillian Trushell, budget and establishment control officer, Field Services Branch, who comes from the Staff Development Branch, Public Services Commission; and to Bruce Clark who joins Land Use Unit, Habitat Management as a biologist. Bruce previously worked in private industry on the development of northeast coal in B.C. and prior to that worked for the Environmental Protection Service.

* *

Al Gibson has left for Ottawa on a six-month secondment to the Resource Allocation Branch. Dennis Brock has assumed duties as acting chief Management Services Division during Al's secondment. Michael Friedlaender, economist, SEP Planning, has also been seconded for three months to the Minister's office in Ottawa. He replaces Sandy Fraser who has returned to Vancouver.

* *

Pat Phillips has commenced a two-year Special Assignment Pay Plan (SAPP), working on decentralization of administrative functions to the Nanaimo, Prince Rupert and New Westminster divisional offices. Pat will be working from the Nanaimo area manager's office and will be missed by her Vancouver co-workers.

* *

Katie Eliot, clerk, Information Branch, has resigned to commence training in the Blanche MacDonald School of Fashion Merchandising.

* *

SEP facility staff relocations from 1090 West Pender include Colin Harrison, who has moved to the Fulton River project and Stu Barnetson who has moved to Kitimat.

* *

Six people from Field Services Branch have been seconded to Regional Planning for six months. They are: Frances Dickson, Dave Schutz, Paul Starr, Larry Duke and Wayne Holmes.

* *

Allison Jamieson, supervisor, Pay and Benefits, Personnel, has accepted a position in Ottawa as staff officer, Pay and Benefits System, with Corporate Personnel, Department of Fisheries and Oceans. Allison leaves us at the end of September, and we wish her well in her move to Ottawa.

* *

Bill Brock, vice-president of the Humboldt Chapter of the American Fisheries Society, reminds staff that the Symposium on Propagation, Enhancement and Rehabilitation of Anadromous Salmonids gets underway October 15 and registration forms are still being accepted. The Symposium will be held at Humboldt State University, Arcata, California. Staff who plan to attend and who have approval under the Regional Conference Plan, may obtain a registration form from Colin McKinnon, 6th floor.

* *

Don Busch, cook aboard the "FPV Arrow Post," passed away on May 24, 1981, in a car accident on the Queen Charlotte Islands, Don joined the Department in April 1979, and he is survived by his wife and two children.

* *

Jim Dagert, primary products inspector, Inspection Division, passed away in hospital September 5 after a lengthy illness. Jim joined Inspection in February, 1971, after serving in the Armed Forces. He initially worked on Commissioner Street and more recently was assigned to the Steveston area. He is survived by a wife and two sons. A Memorial Service was held at North Star Masonic Hall, Whalley, on September 8.

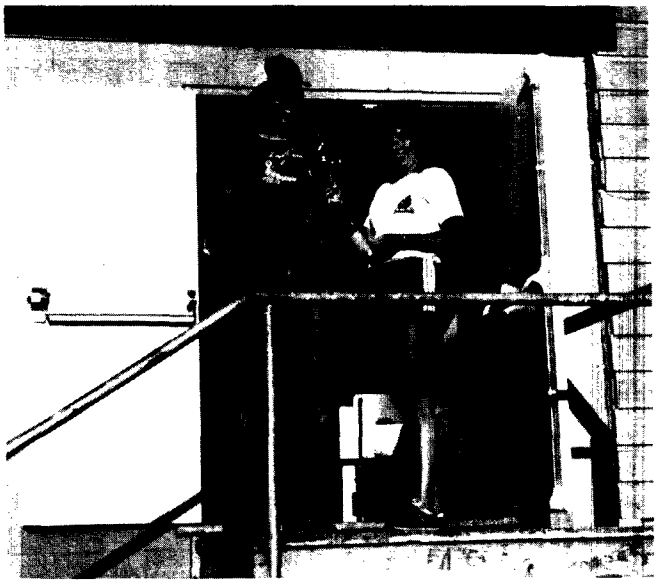
New biological staff members at Prince Rupert include: Dave Peacock who is the new salmon managment biologist, Central Coast; and Lynda Orman, salmon management biologist, Queen Charlotte Islands and North Coast troll biologist. Steve Bachan has been announced as the senior managment technician, Central Coast.

* *

Several recent SFU graduates caught our attention. Lillian Martin, who spent eight years with Habitat Protection as a chemistry lab technician at Cypress Creek, was awarded a bachelor of science degree in Physical Chemistry. She is now going to enter graduate school. Valerie Schouwenburg, a seven-year veteran of the Head Recovery Program, received her Bachelor of Education degree. She's accepted a teaching position in Kelowna. Kathryn Paish, who contributed substantially to many of the studies Howard Paish and Associates have undertaken for the Department, received her Bachelor of Science degree in Biology. Joe Truscott, who was coordinating the compensatory habitat replacement project for the Roberts Bank port development, was awarded the first Master of Resource Management degree issued by SFU. He has since joined the provincial government.

* *

Bob Humphreys, herring coordinator, has accepted a secondment for an indefinite period as section head, Herring Research, Resource Services Branch.



The 1981 Department softball tournament was held in Nanaimo on a sun-scorched August day. The final victor was the Groundfish Management team from the Pacific Biological Station. Above, Judy Glenn captain of the 1090 W. Pender team, presents Louis Lapis of Groundfish Management with the 1981 trophy. Last year, Judy led the headquarters team to victory in the one-day tournament.

Born in August to Lois and Mike Brownlee, Habitat Management Division, a son, John, weighing 8 lb. 4 oz. (3.7 kilograms); born to Corrine and Ted Perry, SEP Facilities, on July 15, their third child, a daughter, Andrina, weighing 8 lb. 11 oz. (3.9 kilograms); and to Debbie and Gerry Walsh, Acting Master, South Relief Unit, Ship Division, a daughter, Jessica Victoria Crystal, born in Victoria on July 28, weighing 6 lb. 4 oz.

What you can expect

by Pat Phillips

Most of you are now aware that I have been given a special, two-year assignment as coordinator, Administrative Services, Decentralization Projects, for which I will be headquartered with the South Coast Division in Nanaimo. I am looking forward to the change of pace and the challenge of the assignment. To take over the duties of budget and establishment control officer is Gillian Trushel. Gillian has had previous experience in administration and finance, and comes to us from the Public Services Commission.

I do not expect to give up writing this column, though it will be somewhat diversified. I am going to look for some "guest writers." We have many other problem areas in the workings of administration and finance, and perhaps others can better explain what I don't seem to get across with my columns and memorandums. Perhaps if it comes straight from the proverbial "horse's mouth," the message will be better understood.

Do you have an award-winning photo?

Give us a shot.

The 1981 Sounder Photo Contest is underway!

October 15, 1981 is the closing date for this year's *Sounder* Photo Contest. Following that date, a panel of three professional photographers will judge the entries, and winners will be announced in the November *Sounder*.

Contest rules

The *Sounder* Photo Contest enables us to obtain quality photographs for use in Department publications and displays. The Contest is open to all Pacific Region staff. All entrants must observe the following rules:

1. One entry per person per category.
2. Entries in previous contests may not be used.
3. Photos submitted after the closing date will not be accepted.

Categories and prizes

There are four categories: fish and fishing, human interest, scenic and humorous photographs. The unusual nature of some of the prizes prevents us allocating prizes to specific categories, however the following prizes will be pressented to the winners in the four categories.

1st Prizes:

-A native Indian print.
-An underwater dive and photograph lesson with Rick Harbo.
-Gold panning in the Fraser Canyon with Tinker Young. Tinker guarantees some color.
-$50 worth of photographic supplies.

2nd Prizes:

-Tickets for two to a concert at Vancouver's Orpheum Theatre.
-A $25 Keg Restaraunt gift certificate.
-Two prizes of an 11"X14" framed photo enlargement.

3rd Prizes:

-Two prizes of a copy of Haig-Brown's "Bright Waters, Bright Fish."
-Two prizes of an 8"X10" mounted photo enlargement.

Following the judging of the photographs in October, prizes will be awarded on the basis of suitability.

Send all entries, with name and description and category attached, to:

Sounder Photo Contest
10th floor
Department of Fisheries and Oceans
1090 West Pender Street
Vancouver, B.C.
V6E 2P1

Remember, the contest closes October 15.

One of last year's winners, taken by Dave Wilson.

SOUNDER

Newsletter of the Department of Fisheries and Oceans, Pacific Region

Volume IX Number 7 October-November 1981

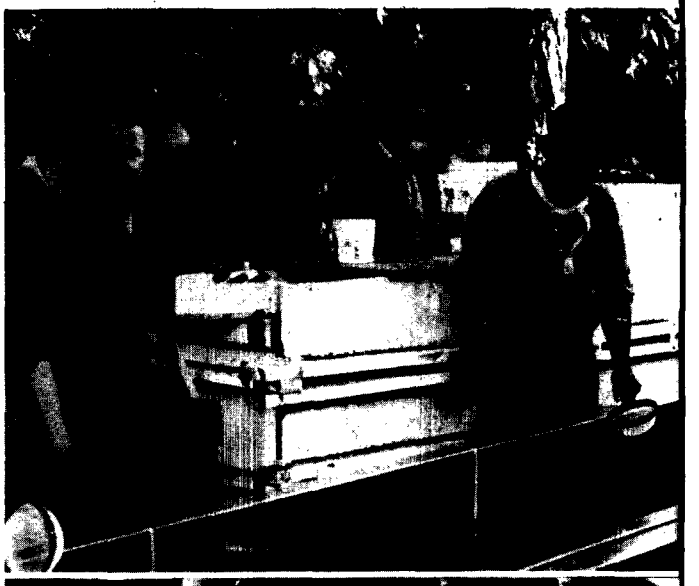
The city that saves its salmon

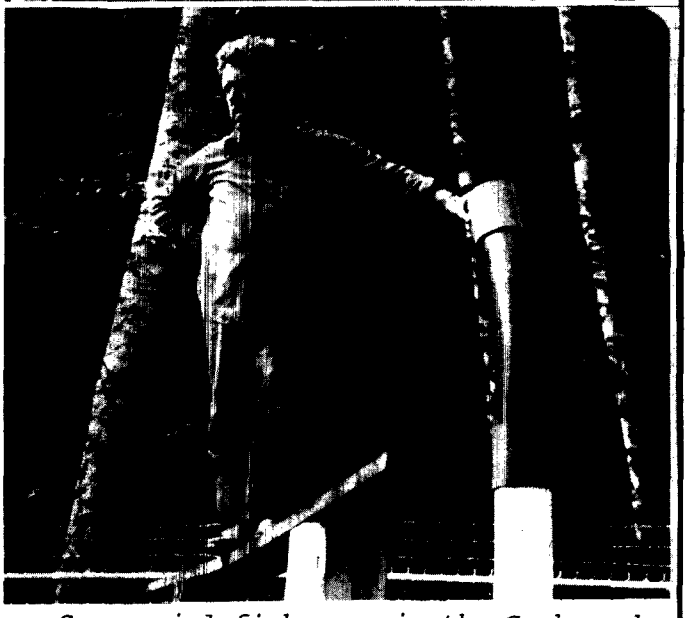
During another autumn, not too many years ago, when without enhancement and without hatcheries the salmon had begun their annual upstream migration, Howard English, Victoria angler and farmer, made a desperate plea to residents of the provincial capital. If Victorians placed a brick in the tank of every toilet in the city, he suggested, then the amount of water conserved might raise the level of the Goldstream River enough to permit adequate spawning.

Whether the water level in any Victorian toilet tanks was lowered that fall, or whether it subsequently raised the water level in the Goldstream River, are details long forgotten. Yet Victorians have never forgotten the salmon, and they never hesitate to remind local Department staff about their concerns. As District Supervisor Larry Duke puts it, "This district was the cradle of the salmonid enhancement concept."

District #6, Victoria, the Pacific Region's southernmost district, has always been a gold mine for SEP's Public Involvement Program. It was ex-fishery officer Jack Brookes who initiated things 25 years ago with his ideas for the propagation of salmon. The trickle of concern has since become a river. SEP Community Advisor Trevor Morris, who covers the lower half of Vancouver Island, now deals with groups like the Amalgamated Conservation Society, which has 6,000 members in the Victoria area.

"I don't actively search for volunteers," Trevor says. "In fact, I practically have to fight them off."





Commercial fishermen in the Sooke subdistrict lend a hand to fry during the off-season. Top, from left to right, Danny Heggelund, Bill Pedneault, Cliff Kane, Mike Banner and Doug Knaedle. Bottom, Pat Forrest installs pipe at new incubation site.

Story continued on page two.

Victoria

Field Services staff are just as pleased with the volunteer efforts in the district, but have felt the side effects of public concern.

"The general public is not too aware of the constraints placed on Fisheries management," says Larry Duke. Fresh in his mind is the aftermath of February 11, 1981, when new sportfishing regulations were introduced and his office was inundated by over 400 phone calls a day.

"There was a lot of smugness in those calls," remembers Fishery Officer Bruce Grant. "We had some people who said they were sensible regulations, but most of the criticism came from people with vested interests in the sport fishery."

For a while it seemed that every second car had its bumpers emblazoned with angry statements protesting the new regulations. *Times-Colonist* outdoors writer Alec Merriman rallied local anglers to join in the protest as Department staff fended off criticisms which partially resulted from incorrect figures given in news reports. One figure alleged that sport anglers caught only two percent of the salmon harvested in the province.

Facts of the face-off

The fact is that commercial catches in the Victoria district, which comprises areas 19 and 20, are roughly five times greater than sport catches. Area 20 was the site of the largest commercial catch on the coast in 1979, when over three million pink and 250,000 sockeye were taken. This year, the same fishery almost equalled that huge catch. Yet in area 19, where all commercial fishing is banned, it is sportfishing which commands most of the attention of district staff. Some argue that Victoria's sport fishery rivals all others in the province. One Saturday last August, over 5,500 sportfishing boats were counted in the waters stretching from Sooke through Saanich Inlet. Estimated value of the sport fishery to the local economy is $30.7

District #6 staff includes, going up from left to right: Kevin Bates, John Stephen, Trevor Morris, Bruce Grant, Ron Kehl, and top row: Lesley Pozer, Gord Curry and Kathleen Vose. (Larry Duke, district supervisor is on secondment to Nanaimo.)

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Fisheries and Oceans / Pêches et Océans

Victoria

million a year. No wonder that after the new sport regulations were introduced, fishery officers who wanted to eat lunch in peace had to cover their uniforms before leaving the Victoria office.

"With the local press in Victoria, we have a very high degree of media coverage," Bruce explains, handing over a binder containing 1981 news clippings two inches thick.

In contrast to the concerns expressed by sport anglers, the blockade of Victoria harbor staged by irate commercial fishermen last summer left the Victoria office untouched. With its proximity to the rich fishing waters of the Strait of Juan de Fuca and the west coast of Vancouver Island, Victoria is a convenient home port for many troll and seine fishermen. The district #6 office issues about 2,000 personal commercial licences each year, more than any other district office in the Pacific Region. In addition, there has been a recent migration of seine fishermen from Alert Bay at the north end of Johnstone Strait.

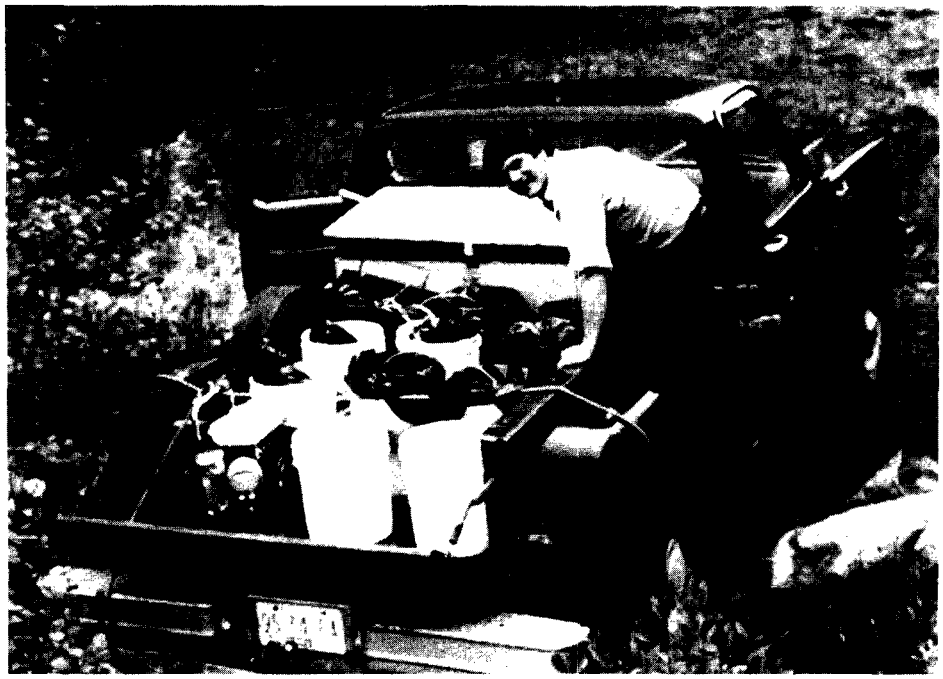
The all-important, invisible line that runs straight through the center of Juan de Fuca, separating Canadian waters from American, is a cause of constant concern in the district. Nowhere else is the need for toting a gun clearer than it is during confrontations with American fishermen, who carry guns more often than their Canadian counterparts. Sooke Fishery Officer John Stephen approached one American boat in Canadian waters last year, only to be warded off by a six-metre boat hook. Six U.S. fishermen have been charged this year with crossing the boundary.

Before Fishery Officer in-training Gordon Curry joined the Sooke office last year, it was left to John Stephen to singlehandedly cover the international line as well as the droves of sportfishing boats in area 20.

"We have very little time for sportfishing patrols and it's one of the major areas in the province," Gordon says.

The view from Sooke

Sooke, like Victoria, has a high level of public participation in salmonid enhancement projects. Many of the present trollers in the Sooke area take advantage of their seasonal work to assist in volunteer projects. Fred Reder, a Department patrolman in area 20 for the past eight years, has been invaluable for coordinating enhancement projects in the area of the



Fishery Officer Gord Curry prepares makeshift rig for transferring coho fry from the Sooke River to Maidenhair and Uglow Creeks. Honda generator drove two aquarium pumps that sustained the fish during transit.

Victoria

San Juan River. Fred often works with crews, who assist in stream clearance, from the Jordan River Corrections Institute. As a result of his efforts, B.C. Forest Products has agreed to reroute a portion of Brown Creek, where log storage had wiped out a significant run of chum salmon. Fred also initiated the San Juan River hatchery, now a SEP community development project operated by Maurice and Lou Tremblay.

Sooke also harbors a small, but time-tested shrimp fishery, a dungeness crab fishery (with a quota of 19,000 tonnes per year) and new fisheries for sea cucumbers and sea urchins. Biologist Rick Harbo did the original research work for the sea cucumber fishery, and discovered that the waters of Sooke Inlet contained one of the most densely-populated sea cucumber habitats on the B.C. coast.

Increasing habitat concerns

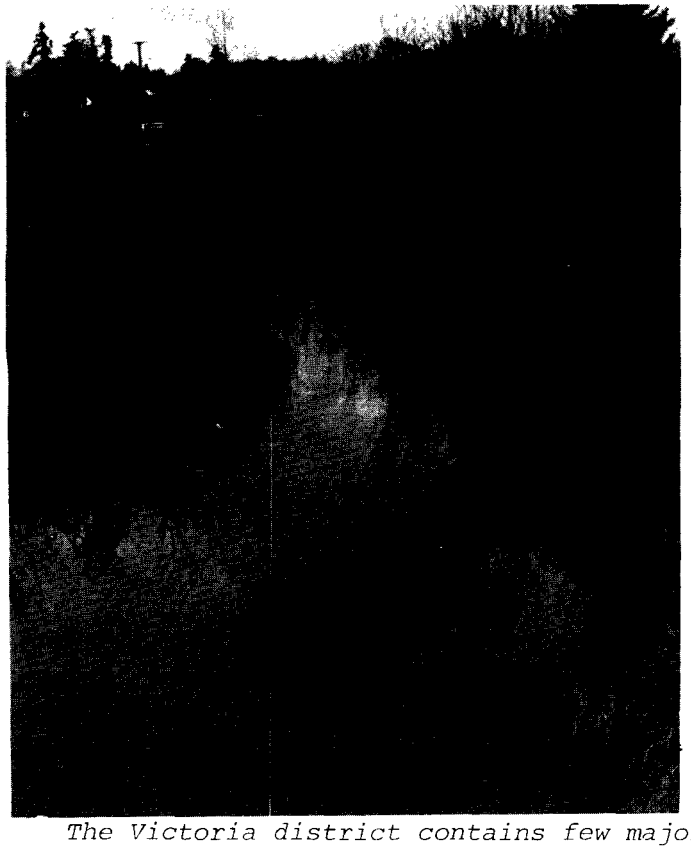
Within the boundaries of the Victoria district lies the second largest city in the province, and with its continued growth lie all the prevailing habitat concerns relating to urban encroachment on fish habitat.

"We have a quarter million people here," says Larry Duke, "and urban development is rampant."

Complicating matters is the shortage of good salmon streams in the vicinity of Victoria. Apart from the Goldstream River, there are only Colquitz and Craigflower Creeks, both of which are lined by suburban housing and industry. Tiny Colquitz was struck by a major disaster this year when an early warning system at a sewage plant failed and four million gallons of raw sewage wiped out the stream's cutthroat trout population. Few salmon were affected, since the mishap occurred in the lower portion of the creek. Fortunately, the Department is receiving full cooperation from the municipalities surrounding the creeks in an attempt to maintain and restore the habitat. Nearing completion is Colquitz Creek "linear park," which includes landscaped areas and enhanced portions of the stream. Sewage, however, will remain a contentious issue in the Victoria district for some time. There is no sewage treatment in Victoria and many communities formerly on septic fields are being converted to sewage line disposal. As the city grows, the problem gets worse and the solution becomes more costly.

Despite its growth, Victoria has retained the essence of a small city. Outlying farmland in Saanich has been held in the agricultural land reserve and prevents the urban sprawl that has marred so many cities. Instead, the city is relying on satellite communities, such as Sooke, to shoulder some of its growth in the coming years. In the next five years, the town of Sooke will almost double in population as housing developments are completed. As this occurs, staff will find it necessary to spend more time safeguarding fish habitat in the area.

Mike Youds
Editor



The Victoria district contains few major rivers, yet small streams, such as this one in Saanich, are abundant.

Down to the sea

Top, crew of the "FPV James Sinclair" pose for the camera, and bottom, three generations of patrol ships moored together in Sooke Harbor.

"It's like comparing a Cadillac to a VW Beetle," says Captain Jack Gosse, comparing his new command, the "FPV James Sinclair" to the old "Howay," of which he was master for several years.

Victoria is the home port for the largest Department ships, the "Tar[illegible]," "Laurier" and "James Sinclair," three generations of patrol ships. From the crowded docks below the district office on Government Street, over 70 crew members come and go. Their voyages span the British Columbia coast, all 40,000 kilometres of it, from Stewart to Sooke. Their missions vary from tasks as uneventful as general patrols to saving the crews of stricken vessels.

With the "James Sinclair," though, the seagoing life has taken on a new dimension. Long novels and card games may still be part of the sailor's fare, but now he or she can watch movies on a video machine in the ward room. The sextant and ship's compass are still reliable navigational tools, but they are lost among the rows of sophisticated equipment that fill the "Sinclair's" bridge. Even that old symbol of maritime romance, the broad wooden wheel, has been displaced by the computer and a small steel wheel. A satellite navigator, smaller than a portable television, is the "Sinclair's" link with its eye in the sky; satellite readings flash latitude, longitude, speed, heading, distance, and drift instantly on the tiny screen.

The ship is built entirely from welded aluminum and is driven by two compact Mororen-und Turbinen-Union (M.T.U.) diesel workhorses. Controllable pitch propellers give the vessel greater manoeuverability. A planing hull allows greater speed but also makes for a rougher ride in heavy seas. (Take note of the hand-holds that line the bridge.)

Aboard the "Sinclair," there remains at least one constant that has been the mark of a good ship for hundreds of years: good food.

Victoria

Food fisheries face diminishing stocks

Since 1976, due to diminishing stocks, the San Juan River has been closed to native food fishing. However, the Pacheenat Band at Port Renfrew has been supplied with food fish since then from the Department's annual test fishing charters in the Strait of Juan de Fuca.

Unfortunately, this year, the Department's test fishing did not start until late September. By this time the Pacheenat Indians had become impatient and had begun to use gillnets in the river. The offending nets were seized by fishery officers, resulting in charges of trespassing, and of unlawful use of a privately owned boat, being laid by the Indians against the two officers involved.

The Sooke Indians have been adequately supplying their needs by trolling with sport and commercial gear in Juan de Fuca Strait all summer. In the fall, if additional fish are required, the Sooke and Becher Bay Indians will use a Departmental beach seine at the mouth of the Sooke River to capture chums, releasing all incidentally caught coho and spring salmon.

In addition to these sources, the three Bands are still eligible to receive Big Qualicum hatchery salmon, delivered to their homes by truck in November. surplus Big Qualicum hatchery salmon, delivered by truck in November, to fulfill their food fish requirements.

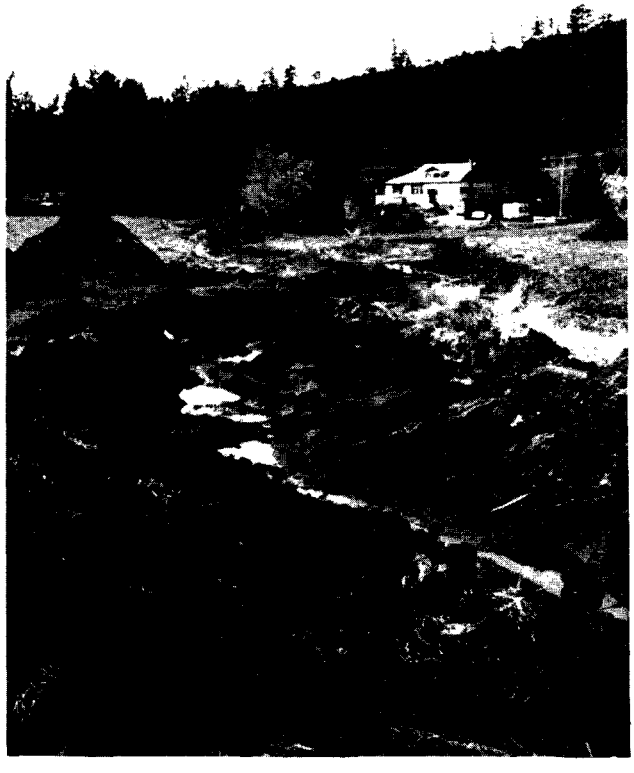
John Stephen
Fishery Officer, Sooke

Victoria suffers growing pains

Habitat protection and related environmental field work are as diversified as the geography of the district itself. From the rugged coastline of the San Juan region to the urban metropolis of Greater Victoria, fishery officers are kept busy attending to anything from logging referrals and road construction to sewer line installation and marina developments.

It may sound like an old, broken record, but a fact is a fact; habitat protection weighs heavily in the day-to-day duties of the field staff. With only three permanent fishery officers, monitoring any long-term projects can become a difficult task.

Urban development has virtually swallowed local streams in Victoria. In one year alone, a major shopping plaza, industrial park and trunk sewer line constructed adjacent to a small salmon-producing stream, as well as a linear park developed in and alongside the same stream, have generated numerous on-site inspections, meetings through technical planning committees and many letters to the proponents and various agencies concerned. Urban



Urban sprawl in the Victoria region was slowed by land controls introduced in the early 1970s, but still presents a problem.

Victoria

sprawl has created extreme pressure on the premium foreshore around southern Vancouver Island. As the Victoria/Sooke region is the year-round sportfishing capital of B.C., marina development and expansion in many of the bays and harbors have run into direct conflict with the resource. Dredging, blasting, and ocean dumping are regarded as activities demanding the utmost attention in order to protect what little foreshore is still productive.

Raw sewage outfalls throughout the Capital Regional District have become a political football in recent years. The Victoria staff respond to numerous public complaints, inquiries and interviews from the media in this high profile area.

Throughout the San Juan drainage systems, active logging still takes place. The San Juan and Gordon are the District's most productive salmon rivers. The latest proposal from B.C. Forest Products is the construction of a major logging road up the Gordon River to connect Port Renfrew with Cowichan Bay. This will open up access to new logging areas and act as a major link to the east side of the Island. Local officers are handling many referrals, in conjunction with this proposal, to develop the best long-range plan that would result in the least environmental damage to the streams.

With the ever-increasing demand for prime land far exceeding the supply, major subdivision development is planned for the Sooke Harbor and Basin foreshore. The effluent runoff from septic fields will adversely affect the last remaining productive oyster and clam beaches in the entire district.

The pressure put to bear on the resource from all segments of industry has required a concerted effort by field officers to keep involved at the ground level.

Ron Kehl
Acting District Supervisor
Victoria

Volunteers with a capital "V"

From modest beginnings, the Public Involvement Program around Victoria has grown to where about 450 volunteers are donating over 11,000 hours of their own time to perpetuate, increase and protect the salmonid resource.

Six active groups are engaged in the incubation and rearing of 750,000 coho, 150,000 chinook and 14,000 chum salmon eggs. The eggs will be incubated in volunteer-constructed facilities at Sooke, Victoria, Mill Bay and Shawnigan Lake. At these locales, between 5,000 to 500,000 eggs will be nurtured by junior school children, sport and commercial fishermen, retired farmers, senior citizens' groups, youth groups and unaffiliated members of the general public. Some fry will be kept and fed, using bathtubs, wooden boxes, aluminum troughs and stream pens, while other fry will be released directly into their natal streams.

Three other volunteer groups are responsible for many hours of stream clearance work, habitat improvement, water flow regulation and instream feeding.

Volunteer projects are labor-intensive and employ very basic technology, including everything from plastic gravel to using simple sandbags. Keeping up with the enthusiasm of volunteers is difficult. Yet, for each setback volunteers encounter, they experience numerous successes. A feeling of self-satisfaction and pride follows as, through volunteer efforts, salmonids flourish.

Trevor Morris
SEP Community Advisor
Victoria

Victoria
The eye of the storm

Monitoring the sport fishery in district 6 involves year-round patrol, for there are very few times throughout the year that someone isn't catching fish. The chinook fishery records catches of more than 90,000 pieces, and in the late summer odd-year pink fishery, 1,000 boats per day bag 70,000 during its brief, peak run of two weeks. Catching those fish are an estimated 2.5 persons in every boat, with a total of 130,000 boat days/year.

Not only are the anglers numerous, but also they are vocal, especially when their fishery is threatened. The February announcement of regulation changes brought such a tide of protest that district 6 staff spent two solid days answering calls from irate anglers. The lobby from the Victoria/Sooke area succeeded in having the regional regulation changes dropped and played a large part in suggesting the present regulations.

District 6 enforcement staff have a difficult, though not impossible job of curbing the number one offence: the sale of sport-caught fish. Several successful prosecutions have resulted in fines of up to $2000 for sale of sport-caught fish. The judges in Victoria take a dim view toward those who don't abide by the daily limits, assessing $1000 fines. In the abalone fishery, the forfeiture of gear was required of several abalone divers. Prosecutions, to date, have barely touched the surface of this lucrative operation.

Bruce Grant
Fishery Officer, Victoria

Fishery Officer Gord Curry caught this dramatic view of the retired "FPV Howay."

The Point of native opportunities

Gloria Point is the Department's new Native Employment Coordinator. She has prepared the following article to inform staff of her role in ensuring the effectiveness of the Department's equal opportunities for natives policy.

Being somewhat of a ham, I was thrilled when asked to submit an article to the Sounder, explaining who I am and what I do.

To start with, my name is Gloria Point, and I am originally from the Chehalis Indian Band. The Chehalis village is located approximately 80 kilometres east of Vancouver. My background has been primarily in administration, management and program development. I've worked as band manager/administrator for the Skookumchuck Indian Band and as executive director for the Mission Indian Friendship Centre. I was also elected to the board of directors for the Provincial Association of Friendship Centres, and this involved travel to communities throughout the region. Just prior to coming to Fisheries, I was employed with the Canada Employment and Immigration Commission as native program officer. In this latter position, I was responsible for coordinating and implementing the native internship program, a regional make-work summer Program designed to provide native students with work experience and career orientation within the federal government. This program employed 85 students in 1981 and 116 in 1980.

Before explaining what I do as the native employment coordinator for the Department of Fisheries and Oceans, a little bit of history on the development of the native employment policy might be helpful. In 1978, Treasury Board and the Public Service Commission jointly announced a policy to increase the participation of Indian, Metis, Non-Status and Inuit people in the Public Service of Canada, in all occupation groups and all levels. In response to the announcement, the Department of Fisheries and Oceans developed an action plan which provided the framework to develop and implement the Equal Opportunities for Natives Program. The program is intended to increase the participation of native people within the decision-making processes as they affect the fishing resource.

To date, the action plan has been distributed to all employees in the region along with an identification questionnaire. Twenty-two native employees were identified out of 1300 in the region. A subcommittee on equal opportunities for natives was formed (chaired by Gary Norberg, regional personnel manager) and I was hired as native employment coordinator on August 31, 1981.

In my capacity as native employment coordinator, I am responsible for plannning, developing and directing programs related to increased employment and career development for natives. I will be involved in the selection process where positions have an impact on the native community. I'm responsible for developing and maintaining an inventory of potential native employees. In my travels, I will be meeting with field staff to discuss native employment, as well as meeting with Indian organizations and groups from which I will recruit natives. I will be available to make presentations on career opportunities within the Department, particularly to student groups.

The Department is committed to equal opportunities for natives and has taken a leading role in the implementation of the program. This is most encouraging and will ensure a successful completion of the program.

If anyone has any questions regarding native employment, please call me at 666-2342.

Gloria Point
Native Employment Coordinator
Personnel Division

Developments signal end for foreign f

Since the implementation of 200-mile fishing zones by countries around the world in the late 1970s, tighter controls have been placed on foreign fishing within these zones, and in many instances foreign fishing has been phased out. Although these measures represent the general case, it has been charged by persons within the fishing industry that, in some cases, national governments have supported foreign fishing instead of developing and expanding domestic fisheries. For example, it was charged in a recent Toronto Globe and Mail editorial that on the east coast of Canada, the Department of Fisheries and Oceans has adopted a policy which grants licences to foreign freezer trawlers instead of developing and licencing a domestic offshore trawl fleet.

This charge comes four years after the Honorable Romeo LeBlanc, when explaining Canada's position on extended jurisdiction, wrote in the July 1977 issue of World Fishing that "we (Canada) need the fish most and we can use them best. Fishing means life for hundreds of Canadian communities." The Minister went on to state "that the coastal state should have full management rights, plus special interests in salmon and other fish that cross or lie beyond the 200-mile line; the coastal state should set the total allowable catch and the coastal state should take all of this it wants, up to 100 percent." Based upon the Minister's article, which was written when extended jurisdiction was declared, it is clear that the Department's policy when allocating fish within Canada's 200-mile zone was to make allocations to Canadian fishermen the number one priority.

Catch reductions

The issues on the east coast which lie behind the Globe and Mail charge are not within the scope of this discussion, but such an editorial does serve notice to the Department that we must outline the effect that the extension of jurisdiction has had on foreign fisheries within our zones.

In the Pacific Region, foreign fishing has been significantly reduced since the implementation of extended jurisdiction in 1977, basically because successful domestic fisheries have developed for species that foreign nations used to fish. The only species in British Columbia that foreign nations still fish is offshore Pacific hake. As can be seen in Table One, total foreign landings in B.C. waters have decreased from 59,422 tonnes in 1975 to 3,199 tonnes as of September 20, 1981.

"Canada has an obligation to allocate to other nations stocks of fish that are surplus to her own domestic needs."

In this time period, several nations have been phased out of three major fisheries in which they formerly participated. The Polish and Japanese rockfish trawl fisheries ended in 1976 and 1977 respectively, while the U.S. rockfish fishery ended on March 31 of this year. The end to this fishery was established in March 1979, when the governments of Canada and the United States established the terms and conditions under which American fishermen would be allowed access to Canadian waters under a phase-out-program. The total catch was set at 6,500 tonnes, divided into different areas within the Canadian zone, over a two-year period to March 31, 1981. The elimination of U.S. vessels fishing rockfish in the Canadian zone was part of a reciprocal agreement between the two governments in which Canadian halibut vessels were phased out of Alaskan fisheries.

The major foreign participant in the sablefish fishery was the Japanese longline fleet. A successful commercial domestic fishery, however, emerged for this species in the late 1970s; thus 1979 was the last year that Japan was granted an allocation. It should be noted that a 200-tonne sablefish quota, plus 50 tonnes of squid, were allocated to Japan in 1980 as payment for exploratory squid research.

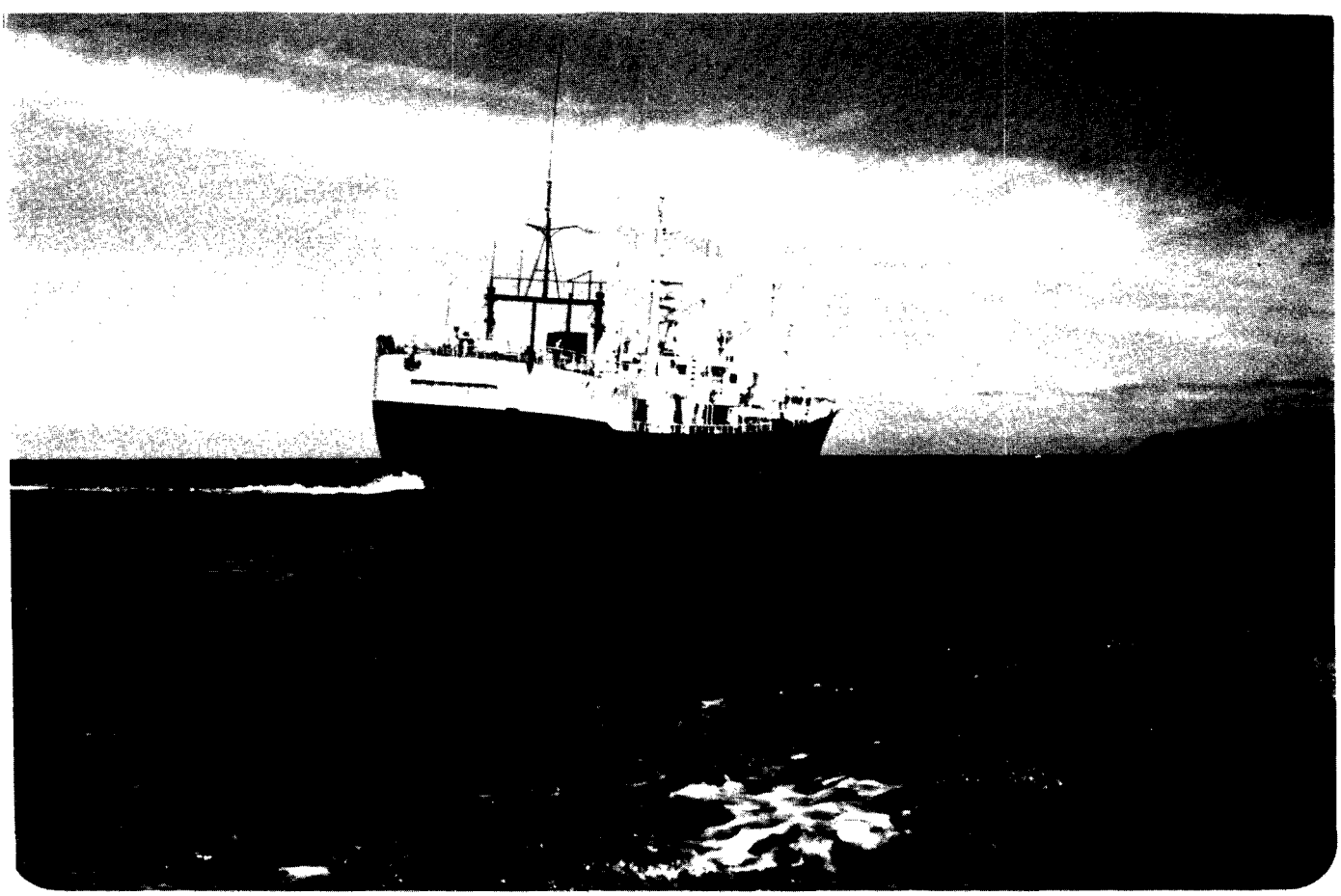
shery

Finally, U.S. vessels which engaged in the halibut fishery in Canadian waters were phased out following the 1978 season. This development was part of the protocol amending the convention between Canada and the United States for the preservation of the halibut fishery of the northern Pacific Ocean and Bering Sea, which was signed on March 29, 1979 and ratified in October 1980.

Catch trends

In these three major fisheries in which foreign vessels were phased out, the catching capacity of the domestic fleet was capable or developed the capability to harvest the established total allowable catch (TAC), plus on-shore processing of these species was economical. Pacific hake, found off-shore, is the only major species within the Pacific Region that foreign vessels harvested prior to extended jurisdiction that is still not fully exploited by the Canadian fleet. This, however, is not generally due to a lack of catching capacity. Rather, the economic feasibility of processing and marketing hake is not attractive at this time. Furthermore, onshore processing companies are leery of processing hake because a parasite in the offshore fish tends to break down the flesh unless it is processed shortly after it is landed. It should be noted that the incidence of this parasite is lower in the inshore (Strait of Georgia) hake stock, which may lead to a commercially viable fishery for this stock before it becomes technically feasible for onshore plants to process fish from the offshore stock.

As a result, under the consensus achieved at the Law of the Sea Conference, and consequently incorporated in Canada's bilateral treaties, Canada has an obligation to allocate stocks of fish that are surplus to her own domestic needs. Canada has bilateral agreements



Korean processing ship cruises off the west coast of Vancouver Island.

for the West Coast with Poland, Japan and the U.S.S.R., and these are the only countries that are presently considered when allocating foreign quotas from Pacific Region's 35,000-tonne TAC for Pacific hake.

"The economic feasibility of processing and marketing hake is not attractive at this time."

Before foreign quotas are granted, however, three levels of priority have been set by the Department when considering allocations of offshore hake. The domestic fishery has first priority. As a result of the lack of interest shown by domestic fishermen and processors, there is only one major participant fishing and processing hake at the present time. A smaller, on-shore processing operation did take place in Nanaimo this year, in which two Canadian trawlers were utilized. Unfortunately, this operation was discontinued in August due to financial reasons.

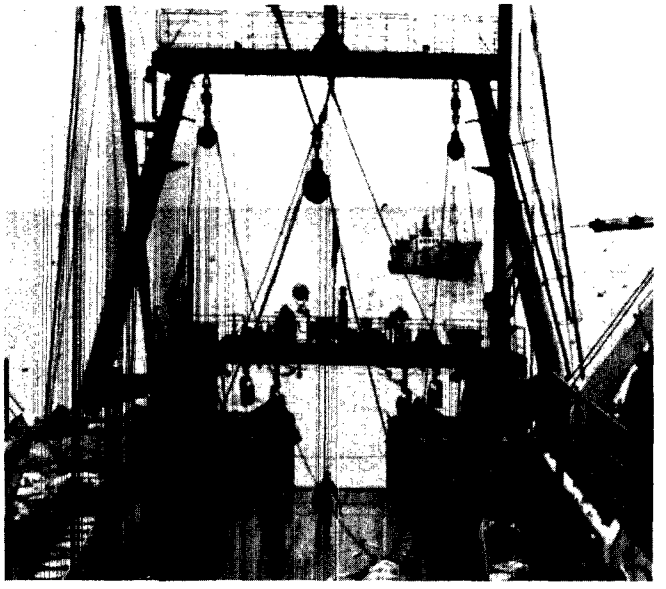
The second priority in the allocation of offshore hake is over-the-side sales to foreign processing vessels. Hake cooperative fishing arrangements with foreign countries began in 1978. These operations involve the utilization of Canadian mid-water trawl vessels which deliver their catch to foreign

Table One

Foreign Vessel Landings in British Columbia by Species and Country, 1975-1981 (metric tons)

Species by Country	1975	1976	1977	1978	1979	1980	1981 [1]
Pacific Hake:							
U.S.S.R.	-	3,918	522	700	-	141	-
Japan	48	-	1,931	3,364	3,637	817	131
Poland	15,704	2,054	2,708	586	4,263	4,943	2,622
Rockfish:							
U.S.A.	3,450	4,929	4,493	3,566	1,744	1,422	364
U.S.S.R.	-	-	8	-	-	-	-
Japan	11,044	10,362	5,220	-	-	-	-
Poland	12,243	3,931	22	-	-	-	-
Korea	38	-	-	-	-	-	-
Sablefish:							
U.S.A.	126	217	345	319	-	-	-
U.S.S.R.	-	-	-	-	-	-	-
Japan	4,570	3,379	3,001	2,183	982	199	-
Korea	1,263	2,335	168	-	-	-	-
Other Groundfish:							
U.S.A.	5,384	NA	NA	NA	316	201	82
U.S.S.R.	-	-	-	-	-	-	-
Japan	1,734	NA	198	-	-	-	-
Poland	1,625	54	194	-	-	-	-
Halibut:							
U.S.A.	193	215	115	110	-	-	-
Dogfish:							
Poland	-	-	402	-	-	-	-
Herring:							
E. Germany	2,000	-	-	-	-	-	-
TOTAL	59,422	31,394	19,327	10,828	10,942	7,723	3,199

NA - Data not available
1 Landings as of September 20, 1981.



Polish trawler hauls in Canadian hake.

processing ships, which in 1981 include vessels from Poland, the U.S.S.R. and Greece. The Canadian fishermen are represented by the Hake Consortium of British Columbia, a body consisting of representatives from the fishing industry responsible for negotiating contracts with foreign partners and directing the domestic fleet on a day-to-day basis.

The benefits to Canadian fishermen increased substantially in the first three years after the 200-mile limit was established. As can be seen in Table Two, in 1978 two Canadian trawlers landed 1,814 tonnes valued at $240,000; in 1979 eight Canadian trawlers landed 4,233 tonnes valued at $560,000; and in 1980 twelve Canadian vessels landed 13,135 tonnes with a landed value of approximately $2 million. Within this period of time, the number of Canadian fishermen increased from 11 to 66, while the number of Canadian vessel fishing-days increased from approximately 70 in 1978 to 700 in 1980.

"The benefits to Canadian fishermen increased substantially in the first three years after the 200-mile limit was established."

Table Two indicates that total landings and the value of the cooperative fishery should increase substantially in 1981. This is due not only to larger allocations and an increase in the price, but also to the fishery starting one month earlier, at the beginning of July this year. Fifteen Canadian vessels are participating, employing 70 to 75 persons for approximately 1,100 vessel fishing-days.

The cooperative fishery is seen as a valuable intermediary step in the

Table Two

Cooperative Arrangement Hake Landings Off the British Columbia Coast, by Country.

1978 - 1981 (metric tons)

Country	1978	1979	1980	1981 [1]
Poland	1,814	3,102	4,796	5,000
U.S.S.R.	-	1,131	4,884	8,000
Greece	-	-	3,530	8,000
TOTAL:	1,814	4,233	13,210	21,000
Value ($'000)	240	560	2,000	3,500

1 Landings indicated are the actual allocations and the total value is a projection based upon these allocations. As of September 20, 1981, actual landings total 15,234 tonnes.

Source: Offshore Division, Department of Fisheries and Oceans, Vancouver, B.C.

Foreign fishing...

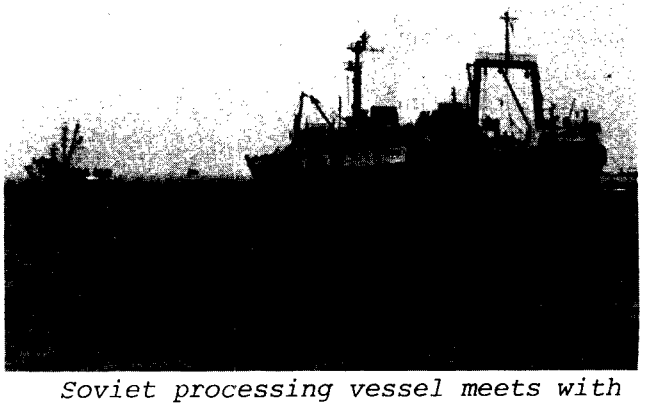
development of a domestic offshore hake fishery, and has had a positive effect on the B.C. fishing industry for a number of reasons. First, the fishery has decreased fishing pressure on traditional groundfish fisheries by the utilization of Canadian trawlers which are among the top groundfish producers in B.C.; this more evenly disperses earnings throughout the whole domestic trawl fleet. This is especially significant now, when vessels are experiencing financial difficulties due to increased fuel costs and uncertain markets. These arrangements have also enabled fishermen to increase their technical knowledge of fishing for hake, and have provided technical knowledge to the processing sector, thus leading to the probable development of a new domestic fishery. Finally, this fishery has contributed greatly to the west coast economy outside of the fishing industry through the purchase of fuel, supplies and ship repairs by foreign nations, with sales of approximately $3 million in 1980.

Utilization versus supply

The third and last priority in the allocation of offshore hake is to foreign countries. As was mentioned earlier, this is mandatory under the Law of the Sea if surplus stocks exist after Canada's domestic needs are met. In 1981, allocations were made to Poland and Japan, each receiving 5,000 tonnes. Following the start of the 1981 fishery, the Minister announced that Poland would be granted an additional quota of 3,000 tonnes in response to the serious financial difficulties in Poland at this time. Foreign nations are charged access and fishing fees, and in 1980 these totalled $237,000.

In summary, it is clear that, on the Pacific Coast, Canada has approached the goals which were set when extended jurisdiction was implemented in 1977. Foreign fleets, apart from those participating in the Pacific hake fishery, have now been completely phased out of Pacific Region's 200-mile fishing zone. It is anticipated that the technology involved in harvesting and processing Pacific hake will advance to the point that in the very near future an economically viable domestic fishery will emerge and all foreign vessels will be completely phased out of the Pacific Region's 200-mile fishing zone.

Trevor B. Proverbs, Head,
Special Programs and Planning,
Offshore Division,



Soviet processing vessel meets with Danish trawler. Canadian vessel is in background.

Smoke of a distant fire

Native fishermen and family smoking sockeye catch at 15 Mile Creek, near Babine Lake, circa 1915. Photo is from Department files. If you have anything to contribute to Sounder, the next deadline is November 25

What you can expect

by Pat Phillips

On June 23, 1981, Director-General Wayne Shinners endorsed the Support Service circular distribution. Margaret Cruickshank, chief, Administration Division, says the circulars requiring updating are being done and staff will, in due course, receive them.

There has been a great deal of staff controversy as to the effectiveness of the circulars. I think the idea is good and a long time in coming, but unless they are continually updated, and presented in a brief but understandable format, they will not be read. More subjects should be covered: Standing Offer Agreements (Vancouver and local field types); Vehicle Acquisition Plans; Departmental Credit Cards, to name a few. Perhaps Finance and the Personnel Division will also contribute and update some of their circulars.

I sympathize with the people who are on the receiving end of some of the paperwork sent to regional headquarters. One of the forms that never seem to be correctly completed is the Requisition for Supplies and Service (No. FP0258). As well, I am completely surprised that the Rejection Slip referred to in Circular No. Two, on Purchasing, has not yet been put into use.

I am not going to cover step by step the full and proper completion of a requisition, but I would ask that you refer to this circular, read it all and then, if in doubt when completing the requisition, refer back to the circular. The most common errors are made in the "Ship To." The addresses are either incomplete or they are addressed to a specific person. All requisitions must be addressed to the Department, Attention: _____. "Dates" are important; please date your requisition. "Delivery Date Requested" must be filled in, using a realistic date, taking into consideration that the item may have to be purchased through the Department of Supplies and Services. Legibility is of prime importance in "Description" and if you do not want to be supplied with a "substitute item," you must explain why.

Please ensure your financial coding is complete: "Vote - Collator - Supp. Code" (or cost code to most of us).

Section 25 is for "Accounts Use Only."

Section 27 is for the originator's signature. Please complete all three lines of this by printing your name, putting in your title and then scribbling your name (which is more often than not unreadable.)

If you are not using the newest form (dated 06/80) please request a supply and start using them.

Another section, put out by Facilities, is "Leased Accommodations." It is most obvious that this section has not been read. If you are planning on renting office space, warehouse space or renewing any rental space, please, if it is a short-term lease, refer to Circular No. 16 and No. 18.

We all know that, like other segments of the Support Service Branch, Materiel Management and Purchasing is there to guide, assist and direct us. A little helpful guidance and direction go a long way and we should endeavor to make the same effort in return by doing work correctly.

At this time, I wish to acknowledge the work of Mrs. Shirley Long (Nyce), district clerk, Kitimat, in preparing a book of instructions to assist her district's fishery officers in their everyday paperwork. This book also has proven to be of great assistance to other personnel in the Field Services Branch, and the work she put into it is much appreciated. We hope to update, reprint and reissue the book this spring.

Pat Phillips
Coordinator
Administrative Services
Decentralization Projects

Klopfenstein's notebook

Tennyson might roll over in his grave while others will just shake their heads, but Albert Klopfenstein, fishery warden in the Smithers subdistrict, has recorded his impressions of the fishery officer training program and passes them on to us in this poem.

In early August, with good reason
We left in midst of salmon season
Towards Regina, shine or raining
For extra sharp policeman training.

We arrived at "Depot," Richman too,
He said, what in hell should I now do?
However, it didn't take too long
For Corporal Oberg to ring the gong.

"Up to the dorms and smart your asses,
Or there will be no weekend passes,
Then to the Barber, that's an order,"
The hair gets shorter, shorter, shorter.

Off to the gym, right off the bat
To measure all that surplus fat.
While few of us were nice and lean;
Most have lots of fat to clean.

As troop we should go down the lane.
We try, but stumble, it's a pain.
I sometimes wondered really whether
We'd ever get our shit together.

March down the road, it's like a gang
Look at their arms, they let them hang.
The Sergeant looked in horror, "jeez,
This can't be but the Fisheries."

At night time in the dorm, it's roaring
Charles McKay is really snoring.
It sounds like a horrendous storm
Roommates move way down the dorm.

In Law we learn it nice and neat
Of how to catch the little creep.
Now then, what section states ARREST?
It sure will put you through the test.

And Shaver says, strength should prevail
When all the written laws should fail.
You drop your head down in a tucker
And really drift the dirty sucker.

With pride we're turning up for drill
The Corporal's voice, it's turning shrill
"Stay straight and keep your buttocks tight
March down the hall, eft, ight, eft, ight."

"March in step with swollen chest
Think that always you're the best.
All the troop is of good stock
But who in hell wears those pink socks?

And Boucher talked of "that" and "this"
Define for me a prejudice.
You never wore it, like a fashion
But you hate your neighbor with a passion.

Rogalski talked of Law as well
There's nothing to it, what the hell.
He served in Rupert as a member
And surely still can well remember
Why seagulls there fly upside down
Because there's nothing worth shitting on.

Derocher's "voila, it's like a game,"
To try to figure out those names.
He calls for Rektal, Inkpen, Kanester...
Impossible, the next one listed.

Up in the dorm, while some were snoozing
The rest were headed downtown boozing.
When they came back they ran to the john
And talked into the great white phone.

And Tinker, yes, he brought some guns
We grabbed the weapons like the huns.
Almost resulting in a quarrel
"But see how dirty are the barrels."

At Self-Defence we pulled and ripped.
We grabbed and heaved and fell and tripped.
It's an important part of school
And not to try it, you'd be a fool.

The Corporal said, "aim for his guts,"
A little low, you hit the nuts.
The class is very pleased with it;
We hope we get more time to hit.

Which one of us was such a brat
To cut a hole in Richard's hat?
He could not keep from the temptation
To provide some extra ventilation.

I am sorry now for those I missed
You know that we're all prejudiced.
I see it's late, look at the clock.
I'd like to thank you, and good luck.

Albert Klopfenstein
Guardian
Prince Rupert

Letters

Officers commended

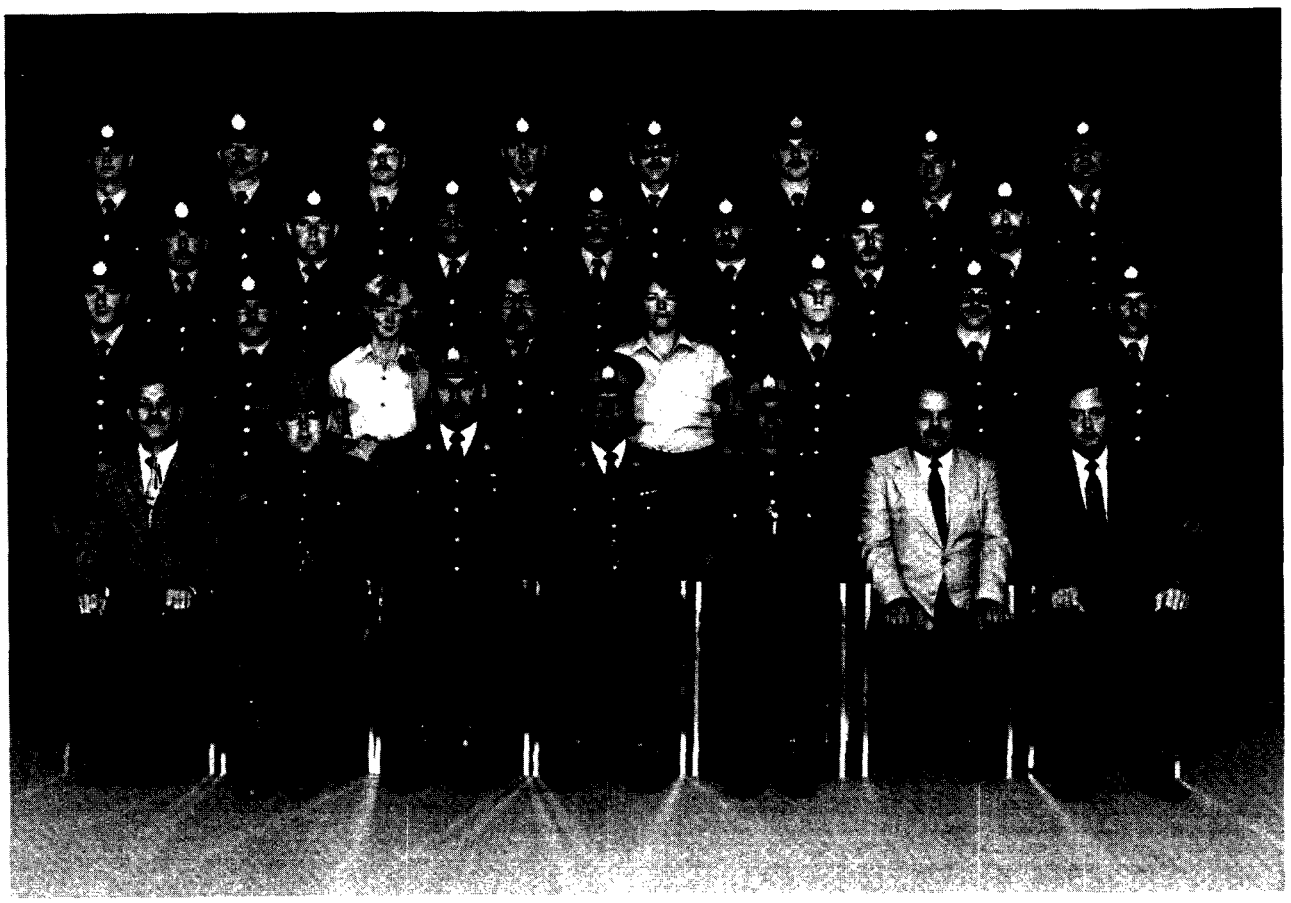
Dear Editor:

I must congratulate the people who took part in the Fisheries Enforcement Course held in Regina from August 12 to September 11, 1981, as they did an excellent job of upholding our name. In fact, the practical training instructor informed me that he would have liked to have the RCMP recruits watch the professional manner in which our officers reacted during their training.

I would also like to thank Mel Hart, Ken Conrad and Tinker Young for their help as coordinators and instructors on the course.

Finally, thanks to all the officers who supported the participants through the loan of arms for our biggest public relations exercise.

Brian Richman,
Training and Career Development Officer,
Field Services Branch



The fishery officer class of 1981, at the RCMP Academy in Regina, Saskatchewan.
Front row: Brian Richman, Corporal G.F. Oberg, Superintendent R.R. MacKeracher, Superintendent G.C. Caldbick, Sergeant Major R.F. Williamson, Tinker Young, Sergeant H.R. Parken.
Second row: R.D. Melvin, G.R. Curry, C. Harlow, C. McKay, S.M. Julien, J.J. Inkpen, B.L. Kanester, E.D. Fast.
Third row: N.G. Robinson, G.A. Coukell, E.A. Robertson, J.A. Burdek, D.B. Knapton, D.W. Rekdal, R.T. Barnes.
Fourth row: R.J. Grindrod, E.M. Teskey, B.P. Spilsted, A. Klopfenstein, M.I. Leask, K.W. Hall, V.P. Fradette, J.W. Caudron.

Letters cont'd

Policy questioned

Dear Editor:

Thank you for your recent letter in reference to the editing error in my Sounder article on Resource Boards.

I recognize that the wording of the section in the official terms of reference on selection of Salmon Board members could easily be mininterpreted, but unfortunately, the editorial change resulted in an incorrect statement. Salmon Resource Board members are appointed by the Executive Director of SEP and the Director-General.

The only comment I have is in respect to editing of direct quotations. I would think that most writers expect that quotations would be left unchanged. What is the editorial policy of the Sounder on this issue?

Yours truly,

R.N. Palmer
Director
Policy, Planning & Program Development

It was an oversight on my part to edit the official terms of reference, but the Sounder's policy regarding quotations does deserve explanation.

In the field of journalism--in print and broadcast media--the quotation is considered sacred and untouchable. This belief serves a dual purpose: it ensures the public that the medium will convey but not alter the message, and it ensures the source that the message will be disseminated in its original form with its original meaning. The integrity of the "press," a fundamental assumption in a democratic society, is preserved.

As an editor of Sounder, I attempt to adhere to this belief as much as possible. Yet, even in the mass media there is an exception to the rule. This exception was perhaps best illustrated by the American reporter who once threatened politicians by telling them he would quote them directly. In other words, in spontaneous dialogue, people do not always say exactly what they mean; they often inject a lot of unnecessary words, stammers, incomplete sentences and just plain gibberish. Hence, editors exercise the privilege of cleaning up quotations by making grammatical corrections without changing the original meaning. In this case, however, a minor grammatical correction backfired when the original wrought its potential for misinterpretation upon the very editor who sought to correct it. This misunderstanding then found its way into the final version. After making extensive changes to an article, I always return it to the source or the author for review. My mistake was misjudging the extent of the change.

Mike Youds
Editor

Spurious emissions

Providing there are 20 Pacific Fisheries employees interested, Claudette Baryla of Pay and Benefits Division, Headquarters, will come to Vancouver during the first week of December to host a 1½ day pre-retirement planning seminar. Information and counselling related to superannuation entitlements, tax investment, will be provided. Please contact Hilary Schwenk (Personnel, Vancouver) at 666-6286 to register if you are seriously contemplating retirement within the next two years and have not attended a previous seminar.

(Effective November 1, 1981, a penalty of the full course fee will be charged for Public Service Commission courses when a cancellation is received by the PSC registrar within 10 working days of the course.)

* *

Don Lawseth, SEP community advisor Terrace, has accepted the position of

hatchery manager, Robertson Creek hatchery. Don and his family will be moving in November.

* *

Gayle Crouser (nee Talbot), former assistant editor for the Sounder, has moved to a new job as secretary to the principal of the Pacific Marine Training Institute.

* *

The following staff changes are reported from Economics and Statistics Branch. Doug McDonald, economist, has returned to Halifax where he will be working for DPA Consultants Ltd. Sue Webber, clerk, Catch Statistics, resigns from the Department at the end of October to return home to Comox. Helen Long, clerk, Catch Statistics, has left to article for her chartered accountant's certificate. Joining the Branch is Liz Buchan, formerly a secretary with the director-general's office.

* *

Bunny Beadnell passed away on September 10 at Comox; Bunny was the wife of ex-fishery officer/Fishing Vessel Insurance Plan ex-Chief, Jack Beadnell.

* *

New staff joining the Department include: Gloria Point, coming from the Canada Employment and Immigration Commission to act as native employment counsellor, Personnel Branch; Andy Charette, purchasing officer, Support Services Branch, who joins the Department from Agriculture in Calgary; and Dennis Villeneuve, head, Facilities Management, Support Services Branch. Dennis was formerly with Public Works in Vancouver.

* *

Leaving the Department after nine years association is Pat Allward, secretary, Habitat Management Division. Pat will be doing freelance work with an agency in the Vancouver area.

* *

Lloyd Webb is acting herring coordinator and Bob Wowchuk is acting program planning officer, both with Field Services Branch.

* *

Ed Zyblut, chief Offshore Division, has returned to Vancouver after a two-month secondment to the Maritimes where he participated in east coast groundfish management.

Willie McKenzie has been announced as supervisor, Kitimat District; Willie leaves his post as assistant supervisor, Prince Rupert.

* *

Jennifer Morley was the successful candidate in the competition for secretary, Director of Regional Planning, Al Wood.

* *

Joining the Department October 26 as supervisor, Pay and Benefits, Personnel is Jean Kawshuk formerly with Revenue Canada.

* *

Born on August 21, 1981, to Laurie and Jerry Farley, second officer aboard the "Tanu," a son, Bryan David, weighing 7 lb. 9 oz.; born on July 14, 1981 to Dodie and Geoff Manifold, third engineer, "Tanu," a son, Joseph Robin, weighing 6 lb. 12 oz. Sally and Grant Scott, supervisor, Kamloops, announce the birth of their daughter, Sarah Ann, born September 9, weighing 8 lb. 4 oz. Grant says he's enjoying many sleepless nights!

* *

Brenda Austin was the successful incumbent in a recent competition for information officer, Information Branch.

* *

Judy Glenn has been confirmed as division coordinator, Special Projects, SEP.

* *

Four new programmer-analysts are very welcome additions to the Computer Services Division; Linda Aaaloe, Man Lee Jung, Valerie Whitehead and Fitzroy Williams.

* *

Brian Spilsted, fishery officer in training at Queen Charlotte City, married Cynthia Favervik in Vernon, on October 28.

* *

Christmas is coming! Check your calendar; the Fisheries staff Christmas party will be held Friday, December 11 at the Legion Hall, 49th and Fraser. Doors open at 7:30 p.m. with a hot meal at 8 p.m., followed by dancing at 9 p.m. Further information will be forthcoming. Everyone welcome, including those from out-of-town.

Do you have an award-winning photo?

Give us a shot.

The 1981 Sounder Photo Contest is underway!

December 1, 1981 is the closing date for this year's *Sounder* Photo Contest. Following that date, a panel of three professional photographers will judge the entries, and winners will be announced in the January, 1982, *Sounder*.

Contest rules

The *Sounder* Photo Contest enables us to obtain quality photographs for use in Department publications and displays. The Contest is open to all Pacific Region staff. All entrants must observe the following rules:

1. One entry per person per category.
2. Entries in previous contests may not be used.
3. Photos submitted after the closing date will not be accepted.

Categories and prizes

There are four categories: fish and fishing, human interest, scenic and humorous photographs. The unusual nature of some of the prizes prevents us allocating prizes to specific categories, however the following prizes will be presented to the winners in the four categories.

1st Prizes:

-A native Indian print.
-An underwater dive and photography lesson with Rick Harbo.
-Gold panning in the Fraser Canyon with Tinker Young. Tinker guarantees some "color."
-$50 worth of photographic supplies.

2nd Prizes:

-Tickets for two to a concert at Vancouver's Orpheum Theatre.
-A $25 Keg Restaurant gift certificate.
-Two prizes of an 11"X14" framed photo enlargement.

3rd Prizes:

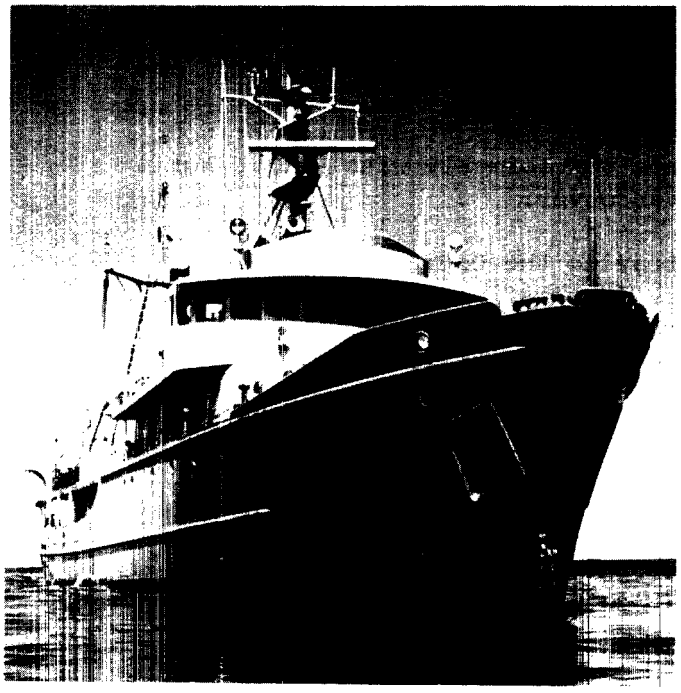
-Two prizes of a copy of Haig-Brown's "Bright Waters, Bright Fish."
-Two prizes of an 8"X10" mounted photo enlargement.

Following the judging of the photographs in December, prizes will be awarded on the basis of suitability.

Send all entries, with name and description and category attached, to:

Sounder Photo Contest
10th floor
Department of Fisheries and Oceans
1090 West Pender Street
Vancouver, B.C.
V6E 2P1

Remember, the contest closes December 1.



One of last year's winners, taken by Fishery Officer Gary Buechler.

SOUNDER

Staff newsletter of the Department of Fisheries and Oceans, Pacific Region

Volume IX Number 8 December 1981

Strait for the future

As British Columbia advances toward the 21st century, the Strait of Georgia, cradle of the province's economy, continues to dominate as the most industrialized and populated region west of the Great Lakes. Managing the fisheries resource in this region, from Campbell River to Victoria and from Toba Inlet to Howe Sound, is the daily fare of Nanaimo District staff.

Nanaimo, the location of Pacific Region's District three office, exemplifies the Strait's unfettered growth. The annual five percent growth rate in the Nanaimo Regional District will rise to over six percent in the 1980s and taper off only slightly in the 1990s. Shopping centers, housing developments and industrial sites spring up with alarming frequency. The east coast of Vancouver Island between Campbell River and Victoria, a pastoral coastline only 15 years ago, is largely prime real estate today. Bathtub capital of the world, and, in Mayor Frank Ney's own words, "the hub of Vancouver Island," Nanaimo is sprawling.

"This city has the dubious honor of having the highest number of shopping centers per capita of any area in the province," laments Fishery Officer Tep Epps, who has worked in the Nanaimo-Ladysmith subdistrict for the past 12 years.

"We're in the midst of an explosion. We're not winning," he says, referring to habitat protection. "We just have to try not to lose too badly. The east coast [of Vancouver Island] is an attractive place to retire, and a lot of retired people are turning to sport fishing. We just have to try to contend with the growth."

continued on page three

New Habitat Branch to be established

Director-General Wayne Shinners has announced that he is going to act on a recommendation to form a Habitat Management Branch.

The recommendation came from the "Final Report on the Revitalization of the Pacific Region Fish Habitat Management Program," prepared by Howard Smith, senior advisor to Assistant Deputy Minister Doug Johnston and Cam MacLeod, director in Ottawa of the Fish Habitat Revitalization Project. The Smith-MacLeod report was prepared with the help of a coordinating committee comprised of Tom Bird, associate chief, Habitat Management; John McNally, senior implementation engineer, SEP; Grant Scott, district supervisor, Kamloops District, and Dr. Ian Birtwell, head, salmon section, Resource Services Branch.

Another recommendation of the report, to move the Habitat Research Division into the new branch from the Resource Services Branch, was rejected. The reason, Wayne Shinners stated in a memo to Habitat staff, is because the Division "has been subjected to several moves in recent years." He went on to acknowledge that "there will be an essential requirement for close communication" between the research people, decentralized staff and the staff of the new Branch.

Habitat staff take time out for a soccer game at their October Habitat meeting.

Decentralization of the majority of habitat staff will continue as planned, he said.

Other key recommendations of the report include:

1. a comprehensive habitat management policy which is fully compatible with national policies should be developed

2. cooperative resource management (CRM) should be a key strategy

3. the Minister of Fisheries and Oceans should administer all of Section 33 of the Fisheries Act

4. the Pacific Region should take the initiative in communications activities

5. some SEP activities in habitat restoration should be consolidated within the Habitat Management Branch.

If, when and how the recommendations will be implemented are questions that directly affect some staff and are of interest to almost everyone. An interview with Wayne Shinners on the impacts of the report will appear in the January-February issue of Sounder.

Maxine Glover
Editor

Sounder
Newsletter of the Department of Fisheries and Oceans, Pacific Region.

Editors: Maxine Glover
Mike Youds

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Nanaimo

continued from page one

District Supervisor Kip Slater, who transferred last summer from the distant Queen Charlotte Islands, emphasizes the strain on fish habitat, resulting from the high concentration of people in the district.

"We're dealing with so many different interests in habitat issues and our prosecution load is quite heavy."

On page four, Ted provides a candid summary of habitat concerns in the Nanaimo-Ladysmith subdistrict.

Commercial fishing in the Nanaimo district was highlighted this year by the Qualicum River terminal fishery, in many ways, an experimental fishery. Recommendations to the Pearse Commission included a return to the more traditional terminal fisheries and the abandonment of the interception fisheries. As Jack Broome points out on page five, terminal fisheries can be very successful.

The two-area troll system, adopted in 1980, has worked to the advantage of Georgia Strait troll fishermen by eliminating competition within the coastal fleet. Despite reduced catches of chinook and coho, "inside" troll fishermen did quite well this year, Jack says.

The district's only interception fishery is the Sabine Channel sockeye fishery, between Texada and Lasqueti Islands. Harvesting in Sabine Channel offers an all-Canadian catch rather than a catch split 50-50 with the United States, which is the case for sockeye fisheries in southern waters, managed by the International Pacific Salmon Fisheries Commission (IPSFC).

Sabine, however, with its incidental catch of coho and chinook, upsets sport anglers. The sportfishing community represents the real growth factor for fisheries management in the Strait of Georgia. Habitat protection work has diminished the efforts once devoted to sport fishing, while the sport has boomed and regulations have followed suit.

"We're providing less service to the sport fishing community than we were ten to 15 years ago," Jack says.

The salmon are not cooperating. Sport fishing in the Strait was generally poor during the busy summer season in 1981, and coho fishing did not pick up until most anglers had stowed their gear for the season.

A new development in the Nanaimo district this year is the Cowichan Band's management of food fishing in the Cowichan River. The system, which arose out of legal conflicts, has proven successful. On page six, Fishery Officer Trevor Fields explains how the situation came about.

One of the promising prospects for the Island's small streams is SEP's Public

Assembled for an October district meeting are, from left to right: back row: Ray Kraft, Lyle Freeman, Brian Lunn, Chris Curtis, Tim Young, Trevor Fields, Bryan Jubenville, Elmer Fast, and Ken Penny. Front row: left to right are: Ted Epps, Gayle Collins, Doris Paquette, Kip Slater, Jack Broome, Neil Armstrong and Rob Melvin. Randy Tancock is missing.

Nanaimo

continued from page three

Involvement Program, which, says Jack, has taken a big workload off Field Services staff. Community Advisor Bob Hurst covers the northern half of Vancouver Island, while Bryan Allen's area of responsibility includes the Sunshine Coast, in the eastern part of District three. Slower development on the Sunshine Coast has left its small streams in good condition; somewhat like the streams of the Fraser Valley 30 years ago, says Bryan. Neil Armstrong, Powell River subdistrict officer, gives a summary on page seven of habitat and fisheries enforcement along the Sunshine Coast.

In contrast, streams on the Island's east coast, as far as salmon habitat is involved, are in grave danger.

"What logging has done in the last thirty years," Bob says, "urban development is doing today. There has come a time to take a stand; we either save these streams for fish habitat or we lose them as cheap sewers."

Bob is currently working on the planning of an overall, multiagency system for the protection of small streams on the B.C. coast.

Apart from the Nanaimo area, where there is little public interest, Bob enjoys the assistance of enthusiastic volunteer groups. In fact, the season, coupled with his "30 projects from here to Holberg" are the reasons for his absence from the following report.

Mike Youds
Editor

Developer's gain is habitat's loss

In district 3, on the east coast of Vancouver Island, the area from Nanaimo east to Mill Bay and West to Oyster bay is a retirement mecca that beckons all those who seek to escape suburbia, soot and snow. What we have is the oft-quoted phrase "a people explosion." With this influx come the inevitable necessities of life: a home, a car, a boat, and a fishing rod. So, of course, the land needs clearing, the roads go in, the ditches are dug, the swamps are drained, the streams are trained, the shoreline is ramped, and the sewage is piped.

Along this immediate 160 km of shoreline and the countless miles of tideline surrounding the numerous Gulf Islands, nine fishery officers and support staff attempt to contend with the intricacies of maintaining habitat suitable for all manner of marine life. Here, we negotiate with the loggers over stream quality, force the subdivider to leave green strips, and demand the undivided attention of those who seek to rearrange our estuaries.

Not only is the area the rec room of the province, but it is, and was to a greater degree in the past, a most valuable habitat for most of the complete spectrum of Pacific coast marine fishes and mammals. Logging and clearing have taken their toll, and now we strive mightily to maintain the status quo until those who persevere with the enhancement concept can take up the slack.

Maybe there is nothing unique about our people problem in comparison with other districts that are similarly affected, but we just don't have the time to look up and compare. "Run, run, run" seems to be our motto these days. Some times we don't see or mention a fish for days. More often than not, the phone

A missing creek: development near Nanaimo.

rings, and the planner or consultant rambles on about his project in terms of hectares, gradients, transects, settling ponds, water retention, set-backs, culvert capacity, energy dissipators, diffuser depths. When in doubt we say 'no' and hope that Habitat Management from the ivory tower will help us. Firefighting we call it, and firefighting it will continue to be until we achieve a much higher habitat protection profile here in the field. Too often our counterparts in related government agencies are biologists, engineers, or hydrologists, and too often the representatives of those who plan to disrupt our realms of jurisdiction are professionals with much expertise. Meet with them, meet their deadlines, they ask. We most certainly would except once in a while we have to go and contend with some pesky fish.

And fish we have; where else would you find oysters, clams, geoducks, herring, salmon, sea urchins, pollock, sea lions and beluga whales in one bay? In and about Nanoose Bay we have managed to preserve those species despite a very negative response to all those who have cast fond attentions towards this almost pristine marine habitat.

When the tools arrive, we'll put down the violin and get about our business of managing the fishery.

Ted Epps
Fishery Officer
Nanaimo

Early terminal fishery a success

The Big Qualicum River chum spawning channels have been in operation since 1967 and have produced average returns of approximately 190,000 chum. Prior to 1981, the escapement requirements to the river and facility were set at approximately 90,000. This year, the target dropped to 75,000 chum, leaving a surplus of 70,000 to 150,000 fish to be harvested.

Some of the Qualicum River surplus is harvested in the Johnstone Strait fall fishery, but this usually leaves us with a substantial number to harvest off the mouth of the river. Over the past number of years, we have mounted a terminal fishery, usually late in November or early December, depending on when the facility has been loaded. This type of fishery has been called a "gumboot" fishery, because of the dramatically decreased quality of the fish which are harvested so close to their spawning time.

In 1981, we attempted a new approach to maximize economic returns from the facility. The approach was to fish 50 percent of the expected surplus on a quota basis prior to loading the facility. By doing this, we would increase quality, and by fishing only 50 percent of the expected surplus, we would minimize the risk of any shortfalls to the facility. The plan was to fish three separate weeks, beginning October 26, aiming for catches of 15,000 pieces the first week, 20,000 the next and 25,000 during the last week. A gillnet test vessel was contracted to determine stock quality, location of major stocks and abundance.

The fishery commenced on the morning of October 26 with a fleet size of approximately 500 gillnetters. A catch of 20,000 chum was taken, with 50 percent of the fish being of good quality. The fishery opened again on November 2 with approximately the same size of fleet. Again the catch was near the 20,000 mark, with good quality fish taken.

Due to problems that I won't get into here, we closed the fishery down until further notice after the November 2 opening. The usual terminal fishery for both seines and gillnets was expected to take place at a later date after the loading of the facility.

From our standpoint and from initial comments from industry, the fishery proved to be a great success. I think we proved that a fishery of this type can be very successful without jeopardizing the production of the facility or the stocks bound for other systems, such as the Fraser River.

For the 1982 season, we will be attempting to refine our methods of stock assessment and identification.

Jack Broome
Assistant District Supervisor
Nanaimo

Nanaimo

This large pulp mill at Crofton is just one of four such operations in the Nanaimo district. Others are located in Nanaimo, Powell River and Port Mellon. The Nanaimo mill contains a union-operated lab that ensures proper chemical handling.

Band manages Cowichan food fishery

Duncan Fishery Officer Trevor Fields and the Cowichan Indian Band are pleased with the results of the 1981 salmon food fishery in the lower Cowichan River, now that the fishery is being managed by the Band itself.

In the past several years, growing problems with the conservation of steelhead and chinook stocks have made strict enforcement of food fishing limitations an absolute necessity. The construction of a hatchery, under the SEP Community Development Program, complicated matters further. As food fishing restrictions became stricter, conflicts between band members and fishery officers increased. Then, in 1980, hearing of initiatives by other bands throughout the province, the Cowichan Band Council decided to enact a bylaw giving it full control over the Band's food fishery. It was next realized that a 1956 bylaw, restricting steelhead fishing by people not belonging to the Band, would probably suffice if it were amended. After this was done, Trevor met with the Band before the 1981 fishing season.

"I said, 'hey, it looks like it's your ballgame this year. Do you have staff to help us manage it?'"

But the system began in a free-for-all fashion, with fishing taking place seven nights a week. Trevor met with the Band Chief and told him about the problems that would inevitably result from overfishing.

"I don't know whether it was my discussion with the Chief or whether they decided on their own, but shortly afterwards they realized that they were going to have responsibilities along with these privileges."

Trevor met with the Band, and it was agreed that food fishing would be limited to three nights a week. Four members of the Band volunteered to patrol the fishing. The system worked very well, with far fewer offences taking place and with sufficient escapements being met. Why has it worked so well?

"Now, because of SEP and because some of the Band members are patrolling the fishery, we're all working together," Trevor says.

A similar system of band management is in effect on the Capilano River. However, the Capilano is not faced with the conservation problems experienced on the Cowichan River.

Mike Youds
Editor

Nanaimo
Sunshine Coast isolated, but not quiet

The Powell River subdistrict, located in the northern corner of District Three, is the area running from Saltery Bay on the north side of Jervis Inlet up to the head of Toba Inlet.

When viewed on a map, it is quite noticeable that, one, the area is semi-isolated from the rest of the district, and two, the main population is concentrated around the coastal strip between Saltery Bay and Lund.

Due to the access problems, Powell River also looks after part of Area 16, which is the northern half of Texada Island, and which ranges from Saltery Bay to Westview.

Included in the area are several prime boating locations, Desolation Sound being one of them. This area alone attracts literally hundreds of boaters each year. The area also includes some of the best oyster and clam growing locations in B.C., and there is extensive harvesting of shellfish in the region. The population count of the area is a little more than 20,000, with most of the employment being provided by MacMillan Bloedel's pulp and paper mill (the largest of its kind in B.C.), various logging operations, fishing and tourism. The commercial fishing here involves mainly 'C' licence operators with a small number of salmon trollers operating locally. Sportfishing attracts hundreds of people each year, but due to other staff commitments, sportfishing does not get the attention that it deserves.

The staff for this area consists of two fishery officers, a two-man patrol vessel and a part-time clerk. There are no seasonal employees. The area also plays host to a small chum hatchery located at Sliammon, that is run by natives and funded by SEP. We have Bishop and Park Creeks, which were the location of a National Film Board documentary on Frank Jenkinson and his rebuilding the chum stocks from less than 1,000 to over 20,000 in these creeks. These types of projects draw a lot of public attention to salmon and are very good teaching aids, helping to make people aware of the salmon resource in the area.

Neil Armstrong
Fishery Officer
Powell River

Those damn beavers

Here is a solution for the people who have ongoing problems with beaver.

I have a battery operated electric fence unit that I had not used for years. After fighting beaver at a lake outfall for the past eight years, watching the silt build up due to constant dam removal, and losing fry in the lower creek due to low water which caused the temperature to rise, I installed the fence.

I installed the unit with two wires crossing the creek at the dam site. The wire upstream was about 20 cm above the water. The other wire was 0.5 m downstream and 6.5 cm above the water. I used snare wire, as it will not rust.

The beavers would normally build within three days of dam removal. I therefore resolved to return daily for the first four days. On the second day, a branch with beaver tooth marks was found against the upstream wire. I have not seen any evidence of beaver activity at the dam site since then.

I removed the unit after four weeks, when the fall rains had raised the lake level.

Peter Bramham
Patrolman, Area 16

Beaver dams may not be the biggest worry in your life, but you probably have solutions to other minor problems encountered in fish culture or fish stock management, stream enhancement, field and laboratory research, law enforcement, clerical work, marine operations or any of the myriad of Department services. Send your solutions to: Sounder, c/o Maxine Glover, 1090 W. Pender St., Vancouver, B.C. (V6E 2P1). We will print them in a new monthly Sounder column entitled Elicitations.

Meeting brought togeth

Past, present and future, and 300 staff from the Field Services Branch converged within the stately surroundings of Victoria's Empress Hotel from November 23 to 26 for the Branch's annual general meeting.

With the general conference theme, "planning," on everyone's mind, the schedule began the first evening with a no-host bar and the ensuing preparatory tradition of a drink-tank at the center of high learning known as the Old Forge. The true value of this experience was not lost in the minds and eyes of the participants as the meeting got underway the following morning.

Don Wilson, acting director of Field Services, announced in his opening remarks the introduction in 1982 of a new coastal licencing computer system, with terminals in every district office. In addition, he announced a new $4.2 million radio system to replace the deteriorated system now in use. (Remember the comment at last year's meeting: "XLI77 has more listeners than Jack Webster.") Rod Palmer, director of policy planning and program development, followed with an overview of Field Services' planning process.

"All is not well in Lotus Land," was the opening remark of SEP Engineering Chief Al Lill, who warned that unless additional funds were obtained for SEP in 1982, the program would take a financial nose dive. Al emphasized the need for better staff communication, more habitat restoration work and more practical enhancement in the Queen Charlotte Islands and along the North Coast area.

In the following two hours, a series of four slide shows presented an informative and

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Photos, from top left: Half-time entertainment prov
and Howard Paish into the incongruous surroundings o
by the DFO boredometer. Lower left: 150 staff dir
Captain Barney Ogmundsen and Engineer Bob Scott.
and Jack Gosse, and the Queen. Top right: Fred Re
right: Acting Field Services Director Don Wilson pre
behalf of the North Coast Division. Lower right: F
Maria Araujo, Jean Pistone, Donna Lee and Harjite G

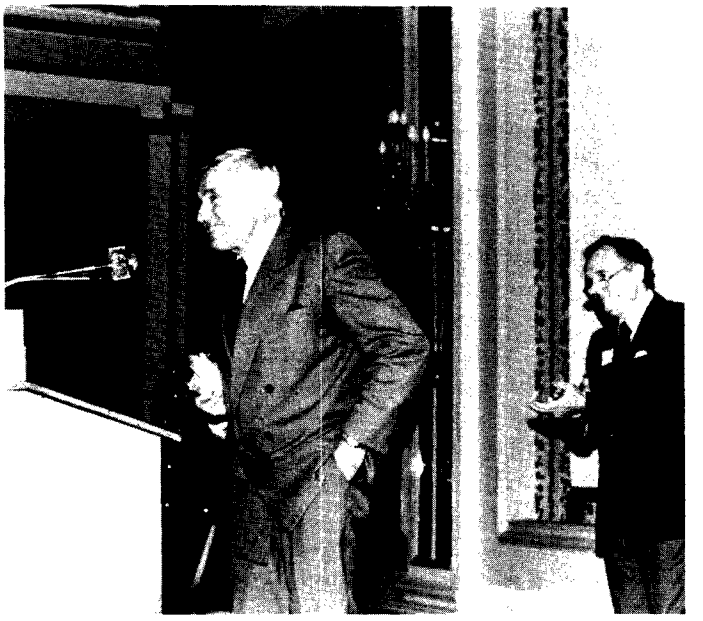
ıer elements of planning

humorous review of the five Pacific Region divisions: Fraser River, Northern B.C. and Yukon, Offshore, Habitat Management, North Coast and South Coast. Dave Milne, Vilma Miller, Steve MacFarlane, Don Anderson and Kip Slater produced and narrated the shows for their respective divisions. A prize for the best of the five went to the Offshore Division, although the Fraser River, Northern B.C. and Yukon Division came very close in the contest.

As the split sessions followed, so too did the questions, debates, proposals, nods, shakes and applause responding to the countless statements, suggestions, requests, pleas, acknowledgements, explanations, analyses (and among them a dozen or so quotations from the preliminary Pearse report) presented by over 100 speakers at various times throughout the three-day meeting. Of course, there were the usual claims that "we've heard it all before," but even the skeptics had to admit it was worth forsaking daily routines to set in perspective the foremost responsibilities and concerns of the Department. Proper perspective is, after all, one of the basics of good planning.

Conference planners Frances Dickson, Dennis Brock, Tom Bird and Fred Fraser were suitably congratulated for a meeting well planned and executed. The winners of three staff awards were also congratulated: Guardian Fred Reder for "outstanding initiative;" Senior North Coast Biologist Don Anderson and his staff for "teamwork," and; Gus Jaltema for his "supervisor of the year" award. The idea for the awards originated with Fishery Officer Lawrence Chambers at the 1980 meeting.

Mike Youds
Editor



ided by a Greek bellydancer, lured by Scotty Roxburgh f the Empress. Middle left: Some sessions were aided ed at Hollywood House to celebrate the retirement of From left, Barney, Tony Preston, Bob, Gordon Nelson ler, winner of the outstanding initiative award. Middle sents teamwork award to Don Anderson, accepting on elaxing during the no-host bar are, from left to right, ewel.

Decentralization problems identified

If decentralization is to succeed, then regional goals, objectives and deadlines will have to be better defined, according to the results of a questionnaire on decentralization that was distributed this fall. The decentralization of certain regional headquarters staff, a policy put into effect in October, 1980 with the aim of improving services to user groups, was predictably unpopular. However, many problems encountered in the initial stages of decentralization, as experienced by staff of the Fraser River, South Coast and North Coast Divisions, could be overcome if the recommendations of the questionnaire are heeded. Decentralization of some Habitat Management staff has not yet taken place.

A session entitled "Decentralization: A Geographic Perspective," held at the recent Field Services Branch general meeting in Victoria, served to clarify some of the benefits and shortcomings of the policy as it has proceeded in 1981.

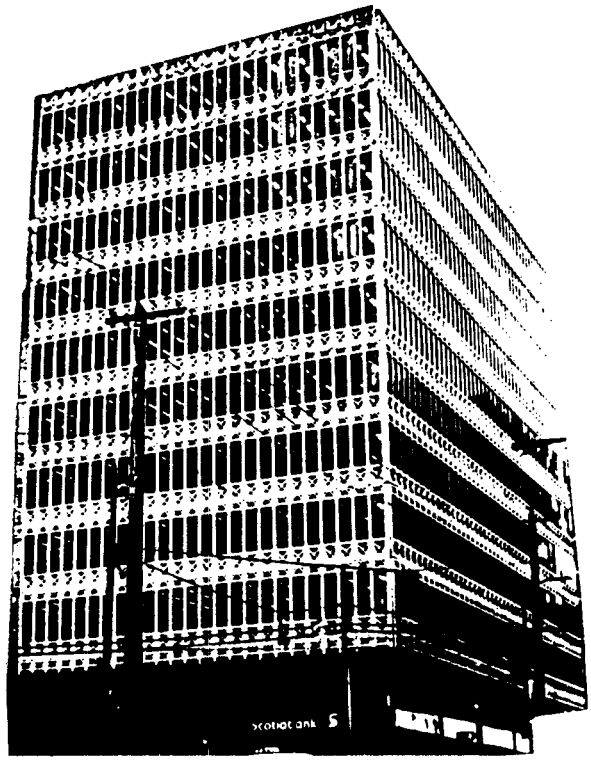
"It appears to me that the main shortcoming of decentralization to date has ironically been identified as the theme for this year's Branch meeting - planning," said panel participant Ron Kadowaki, a biologist who was decentralized from Vancouver to Prince Rupert.

South Coast Division Sr. Biologist and panel chairperson Dave Schutz, suggested that it is still too early to decide whether the decentralization of staff has achieved its original purpose. However, it was also suggested by another participant in the session, that a questionnaire be presented to the fishing industry to determine whether the policy has improved service to that user group.

The results of the staff questionnaire, compiled by Frances Dickson of Regional Planning, are presented here.

Questionnaire summary

A total of 23 completed questionnaires were returned representing a 70 percent response. Except for the Fraser River Division, and some North Coast Division staff who are spending a considerable amount of time travelling to



Vancouver for meetings, the majority of decentralized staff feel they now spend more time in their geographic work area. North Coast and Fraser River staff feel that decentralization has resulted in more time away from their families; only two respondents from the three divisions feel that they are home more with their families, Fraser River Division staff are spending more time commuting to work.

Generally, all three Divisions are most unhappy with the level or lack of services being provided them. All Divisions wish to have their own purchasing officer and some level of administrative and financial support. Ninety-five percent of staff are completely dissatisfied with the lack of library services which results in impairment of job performance.

The majority of staff feel decentralization has not yet benefited the resource or the Department's clients. However, staff do feel that some improvement will be realized in the future.

The majority of staff feel decentralization has affected their personal development. Staff based in Nanaimo and Prince Rupert foresee difficulties in attending courses and workshops, which are

usually held in Vancouver to avoid travel costs and overtime restrictions. All three Divisions feel a growing lack of communications between the Divisions, between Vancouver and between other Branches. This growing isolation, they feel, will restrict their professional development.

All decentralized staff felt their communications had improved with the district staff who are housed in the same offices, but it is felt there has been little change in communication with other districts' staff.

All staff feel that administration, purchasing, finance, personnel, library, habitat management and SEP Facility Operations Unit staff should be decentralized. South Coast Division staff, citing too long a period with "actors," requests decentralization of their area Manager and senior biologist.

Staff were evenly split as to whether the quality of their lives had improved, deteriorated or not changed as a result of decentralization. South Coast staff believe their families have benefited from decentralization, unlike North Coast or Fraser River Division staff.

Only one staff member indicated a decrease in cost of living as a result of decentralization, while ten said their costs had increased and 12 reported no change. There was disagreement over this issue among New Westminster staff.

Major recommendations based on survey results

1. Immediately decentralize support services staff to provide services in the field of purchasing, administration finance and personnel. Library services, especially to Prince Rupert, must be implemented; there is nearly unanimous unhappiness with the present library service.

2. Decentralize some Habitat Management biological staff and the SEP Facilities Operations Unit headquarters staff.

3. In order for decentralization to succeed, there is need to better define regional goals, objectives and deadlines.

4. There is a need to greatly improve communications both between divisions and with headquarters and other branches.

5. Better coordination and synchronization of meetings at headquarters must be achieved so that staff absence from work areas can be reduced. Budgetary allowances and overtime costs must be provided for travel.

6. There is a need to provide contacts at headquarters who can respond to fishermen's and other clients' queries about decentralized services.

7. There is an urgent need to decentralize the substantive area manager and senior biologist to Nanaimo and eliminate the series of "actors."

8. Extraordinary measures must be allowed so that the North Coast Division can hire its full complement of biological technicians and term staff. Due to failure to recruit staff to these positions, it is recommended that some technicians be centralized in Vancouver, going to the North Coast area for field work only. It is also recommended that as an incentive, overtime restrictions be relaxed for these staff.

9. There is need to provide funds to completely equip the decentralized units to the level provided at headquarters.

10. In order to avoid repeating the misfortunes experienced in past decentralization, it is recommended that for future decentralizations the following points be considered:

(a) plan the move completely by setting goals and schedules;
(b) make organizers accountable;
(c) ensure facilities are available prior to the move;
(d) phase-in decentralization; don't force it;
(e) provide the necessary funds to ensure its success.

Summer work programs: an assessment

The number of students who find temporary work with the Department has increased substantially over the past few years. Students are not the only ones to benefit from this work, as they bring welcome relief to lighten the heavy workloads of many permanent staff. This year, Lorne Hawrelak, emergency planning officer, prepared a full assessment of the various summer programs, and in the following article he summarizes that assessment.

The Pacific Region participated in three student employment programs in 1981. A total of 274 students was employed for 3,460 work weeks. The breakdowns were as follows:

	No. of students	Male	Female	Work Weeks
COSEP	151	89	62	2,112
SYEP	105	57	48	1,024
Fish Culture Technology Educational Training Program	18	10	8	324
TOTALS	274	156	118	3,460

The Career Oriented Summer Employment Program (COSEP) was a new program for post-secondary students. Aside from providing students with employment during the summer months, the objective of the program was to introduce the department as a potential employer to the students. At the same time, students were evaluated, providing the department with an assessment of individual students as potential employees. At the end of the summer, students were asked to give a critique of the program. Although many useful suggestions were made to improve the program, students generally felt the experience was interesting and relevant to their career objectives. It is expected a significant number will return next year, with many eventually becoming potential full-time employees.

The Summer Youth Employment Program (SYEP) was established primarily to provide employment to students in areas where unemployment was high. Salaries were the equivalent of the provincial minimum wage, and some students were high school students. Employment was on a project basis, with a sponsor or project manager responsible for the project, and the students serving as employees of the sponsor or project leader rather than of the Department. This program was successful too, with many useful projects being completed.

The Fish Culture Technology Educational and Training Program was a co-op venture between the Pacific Biological Station and Malaspina College in Nanaimo. The objective was to provide educational and practical experience in fisheries and research management to students enrolled in the Fish Culture Technology program at Malaspina College. This was a pilot project, and it is presently being evaluated by the director, Resource Services Branch, and by Malaspina College. Based on this first year, there is hope that this joint program can continue.

Student programs are not necessarily continuous in nature; the decision on which, if any, will proceed is made each spring by the government. In spite of this uncertainty, it is highly probable that these programs will continue next summer. We have already outlined a work plan and schedule for next year. By getting an earlier start, it is hoped that many of the problems we experienced this year, especially in recruiting, will be overcome.

Lorne Hawrelak
Emergency Planning Coordinator
Field Services Branch

Branch to meet with industry

Representatives of the Groundfish, Herring, Salmon and Shellfish sections of the Resource Services Branch are meeting members of the fishing industry December 14 and 15 in Vancouver, and December 16 and 17 in Prince Rupert. The meetings are to provide an opportunity to review results of some of the research undertaken in 1981. All Department staff are welcome to attend.

Vancouver meetings will be held in Conference Rooms One and Two of the Robson Square Media Center, 800 Robson Street. The Prince Rupert meetings will be held in the Fisherman's Hall.

AGENDA

VANCOUVER

December 14

1030 - 1200 Shellfish
Results of research studies
Stock Assessments

1300 - 1500 Herring
Management Strategies
Stock Assessments
Tagging Results
Impoundment Studies

1500 - 1700 Salmon
West Coast Troll Fishery
Chinook Investigations
Habitat Protection Studies
Brief Review of Salmon Enhancement Program

1900 - 2200 Groundfish
Groundfish Research Studies

December 15

1300 - 1700 Groundfish Assessments

Letters

Poem in poor taste

Dear Editor:

What kind of images are brought to mind when you read the following:

"..... little creep"
"..... drift the dirty sucker"
"..... hate your neighbor with a passion"
"..... aim for his guts, a little low, you hit the the nuts."

These are excerpted from the poem on page 16 of our (October – November) Sounder.

We doubt that the average fisherman or member of the public reading the rhyme would think of it as being humorous. In fact, the poem may only confirm their present belief that Fisheries is more of a police force than a resource management organization.

We think our present public image leaves much to be desired and don't feel that this kind of article will improve it. We are not arguing against the need for a well-trained enforcement branch in Fisheries. We are arguing, however, that this poem belongs in the locker room rather than the Sounder.

In view of the wide circulation of the Sounder, it would seem advisable to omit this type of article in future issues.

Bruce Hillaby
on behalf of the
staff of the Water Use Unit
Habitat Management Division

Editor's response

As a staff newsletter, the Sounder does not have a wide circulation and is intended for distribution among Department staff only. Furthermore, the disqualifier in the staff box on page two states that any opinions expressed in the Sounder do not necessarily reflect the policies of the Department. The poem was printed in the spirit with which it was penned and submitted: lighthearted humor. We would like to hear other people's views on this issue.

Letters cont'd.

More training needed

Dear Editor:

I have a little something for everyone to read. I am a seaman on the "FPV Chilco Post," stationed at Alert Bay, B.C. During the four years I have been working in the Department, I've come to notice one thing that is lacking in field jobs: on-the-job training. I would think that the Department would benefit by having some kind of on-the-job training, especially for all boat crews, since they deal directly with the fisheries.

I suggest that deck crews and all other parties interested could have one or two meetings each month. The meetings could take place right on board the ships, with captains, mates and, wherever possible, local fishery officers. The purpose would be to discuss and teach the different methods of doing enforcement tasks; such things as walking creeks, how to count fish, what signs to observe, what kind of information is needed for particular activities, how to take scale samples, how to check the maturity of herring roe and herring spawn. All hands should be taught how to identify different species of salmon, the various spawning periods of the species and the time of year each fishery takes place.

The subjects are almost limitless, and there are untold advantages in having a knowledgeable crew. There is ample opportunity for instruction to take place during port calls. Let's face it, we are not just "boat people"; we are out there to do a job that sometimes involves far more than just being a Captain, mate or a seaman. I think it would be more interesting and rewarding if most of us knew what we are doing out there, aside from just running a ship.

Better communications and discussion among different levels could prove to be very helpful. This same kind of group discussion could be useful to review first aid training and fire fighting methods.

Sincerely,
Eric Nevatie
Seaman
FPV Chilco Post
Alert Bay, B.C.

Chief responds

Editor's note: To obtain a response to Eric's letter, we forwarded a copy to Gordon Irving, Chief, Ship Division.

Dear Editor:

I have to agree that our patrol vessel personnel should receive more on-the-job fisheries management training, particularly since in the normal course of their duties, they provide the seagoing eyes and ears to those who are charged with the on-site management of our various fisheries.

As an initial step towards implementing such a training program, Brian Richman addressed this subject at the November Field Services Branch annual meeting. A follow-up discussion will be held at the Ship Division's annual Vessel Master's meeting, scheduled for February, 1982.

To conclude, Eric may be assured that every effort will be made to resolve his valid concerns.

Yours truly
Gordon Irving
Chief
Ship Division
Support Services Branch

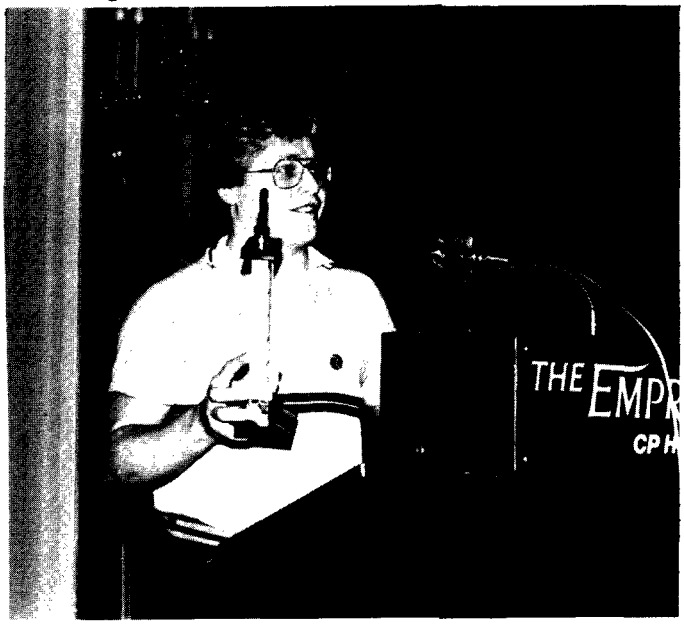
Spurious emissions

Asha Fraser has left the Licence section to work at the Fairmont Medical Clinic, which will be handy as she is expecting her first child in June.

Gordon Curry, Sooke fishery officer, and his wife, Susan, have a family. Matthew Erikson, weighing 7 lbs 6 oz. (3.3 kg), was born October 20.

Spurious...

Lorne Hawrelak sent along this photo of the seven Pacific Region fishery officers who participated in the Fisheries Emergency Control Organization Course in early October. Challenged to a volleyball match by an insulting note from Scotia-Fundy fishery officers, these magnificent seven defended the national reputation of the Region in a fight-to-the-finish series. Pacific Region won the series. From left to right are: Barry Ackerman, Vancouver; Randy Brahniuk, Prince Rupert; Chris Curtis, Qualicum Beach; Malcolm Farquhar, Whitehorse; Bruce Grant, Victoria; Dave Hahn, Port Hardy, and Doug Swift, New Westminster. Lorne asks us to ignore the bearded man in front, apparently a misplaced Newfoundlander. Below, Barry Ackerman accepts challenge award at general meeting in Victoria.



Joining Offshore Division as program officer, Special Projects, is Beverley Stewart, formerly with the Coast Guard.

* *

Born to Elaine and Gus Jaltema, supervisor, Prince Rupert, their third son, Steven Joseph, on October 10. Steven weighed 7 lbs 8 oz. (3.4 kg) at birth.

* *

Married November 7, 1981, was Suzanne Hampson, SEP staffing officer, Personnel, to Clayton Chamberlain.

* *

Married in Chilliwack November 7, 1981, was Dale Fetzner, Inches Creek hatchery, to Judy Ryall.

* *

Leaving the Department for other positions are Tommy Ho, Project Engineer, SEP, and Daniel Santos, draftsman, SEP Engineering.

* *

Betty Leung, Micom supervisor, has left SEP to go to ICBC and Donna Samuelson, Micom operator, has left SEP to go to Guaranty Trust in Vancouver.

* *

Larry Ottman has been announced as the successful candidate for the position of assistant supervisor, New Westminster.

* *

Born to Lexie and Bruce Shepherd, new project co-ordinator, SEP, a son, Alexander Bruce, on October 31, weighing 8 lbs 3 oz. (3.7 kg).

* *

The Vancouver Fisheries Hockey Team is well into its season, having defeated the Environmental Protection Service Team, won one game, and lost another to the West Van Lab Team.

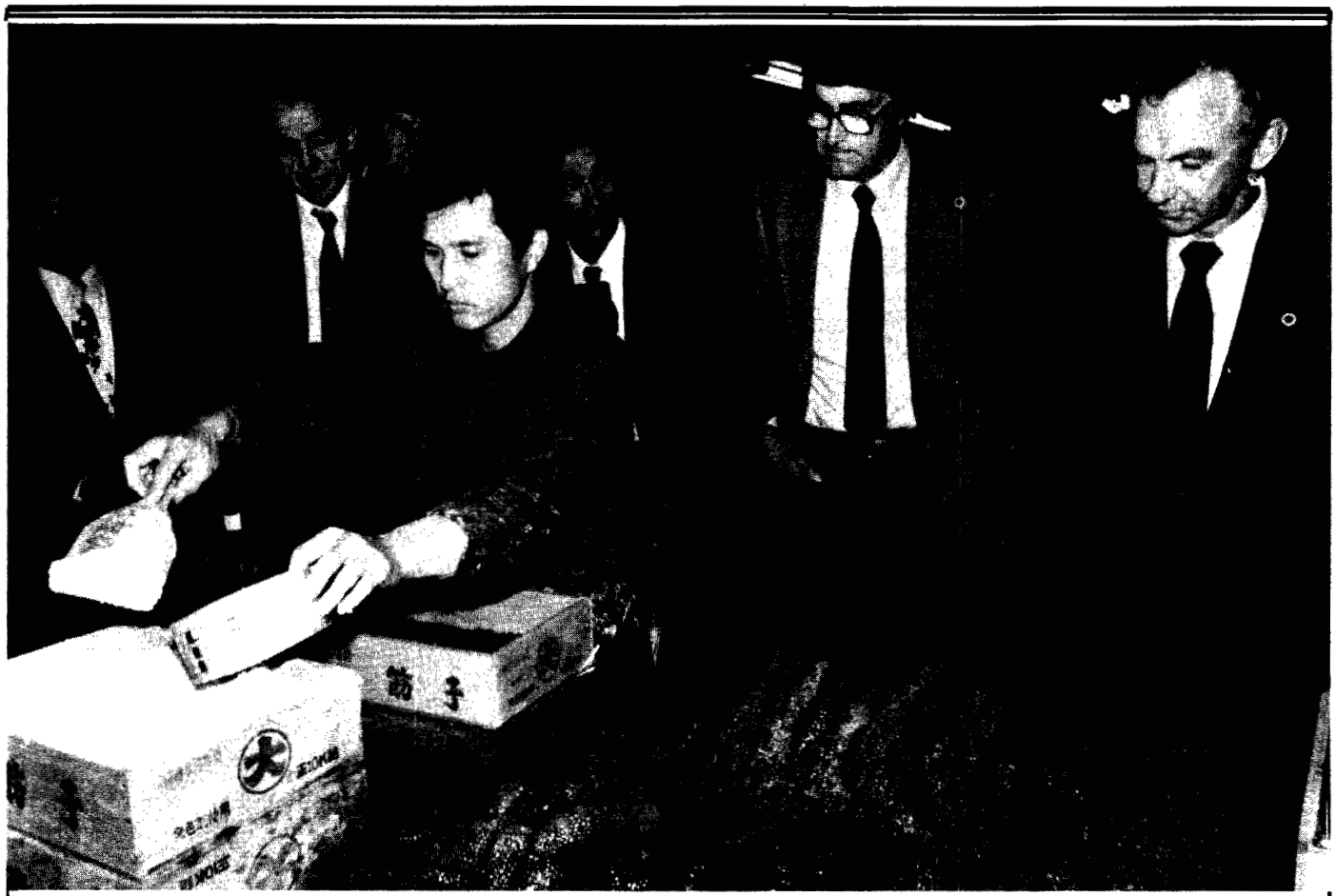
* *

Wayne Shinners, director general, has announced his intention to form a separate Habitat Management Branch.

* *

A highlight of the Field Services Branch Annual Meeting was the unveiling of the musical talents of vocalist and pianist, Don Wilson; however, undoubtedly the Greek dancer had to take the top prize in this unofficial category.

* *



The Occidentals in this picture are Department staff on a recent tour of Japan. From left are: Wally Johnson, chairman, Fisheries and Oceans Research Advisory Council(FORAC); Jim Wild, senior implementation engineer; Ward Falkner, SEP executive director, Doug Johnston, assistant deputy minister, Pacific and Freshwater Fisheries. Salmon roe are being packaged and brined.

From Sooke to Haines Junction

Merry Christmas to all Fisheries staff