

## Fisheries and Marine Service

Based on the results of the Fisheries Service's experimental operation in 1972, and the monitoring of the 1974 Skidegate operation, it was recommended that propagation and harvest of herring spawn on kelp within enclosures be continued on a trial basis in 1975. The Herring Committee and Herring Advisory Board agreed to permit a limited trial fishery in 1975 and people were invited to apply for permits for this type of fishery.

A total of 11 permits have been issued for propagation and harvest of herring spawn on kelp within enclosures in 1975. Permits have been issued for the Queen Charlotte Islands, Prince Rupert area, Central Coast, Johnstone Strait, west coast of Vancouver Island and Georgia Strait areas. The 1975 fishery will be assessed and reviewed before a decision is made as to whether this fishery will be continued in 1976.

## KITIMAT II



Photos by M.B. Gay

FPC "KITIMAT II", built by Philbrooks' Shipyard Ltd. to the plans of William Garden, was christened at New Westminster Repair Station on October 16, 1974 by Mrs. W.R. Hourston.

She is now performing her duties in the North under the command of Captain C.A. Casey.

This vessel, whose namesake was retired from the service in 1972 after 33 years of continuous duty, is 65' in length with 17' beam, and has a cruising speed of 15.5 knots. The hull, deck and super structure is of fibreglas. The main engines are twin General Motors Detroit V1271 diesels each developing 440 H.P. Auxiliary power is supplied by a 3,000 watt Onan generator. Steering is by Wagner hydraulic complete with automatic pilot. The electronic equipment is the most sophisticated for a vessel of this size on the coast and includes two Marconi CH25 SSB radio telephones, one VHF set, Mickey Mouse, Direction Finder, Loran, one special Ekolite sounder for herring surveys and one Furuno for salmon surveying and general purpose,



**KITIMAT II**  
VANCOUVER B.C.

one Westmar Sonar, Furuno 32 miles Radar. Lifesaving equipment to C.S.I. requirements includes an 8 man Dunlop inflatable raft and one Canova rubber inflated boat.

Three sister ships are in various stages of completion at this time. The "COMOX POST" is scheduled for delivery on March 15, 1975 and after a short shakedown period will replace her namesake at Port Alberni on April 17, 1975. She will be followed shortly by FPC "ATLIN POST" and then FPC "CHILCO POST" in August 1975.

Captain M.B. Gay

## CAPTAIN REGINALD WATTS 1920 - 1975

On January 27, 1975 the flags on the Headquarters vessels FPC "TANU", "HOWAY" and "LAURIER" were flown at half mast in commemoration of a highly respected member of the FPC "TANU", 1st Officer Reginald Walter James Watts, (Captain), who passed away January 26, 1975.

Captain Watts joined the Fisheries Service February 21, 1958 and was Master/Engineer of the FPL "BRAMA" based at Port Hardy and Alert Bay, then 2nd Officer FPC "LAURIER" September 1959, Chief Officer Headquarters Relief 1959, 1st Officer FPC "KITIMAT" 1961, 1st Officer FPC "HOWAY" 1962, Acting Master FPC "HOWAY" 1962, off and on Acting Master FPC "HOWAY" and Headquarters Relief 1963-68 and was promoted to 1st Officer FPC "TANU" where he served up to the present time and also in the capacity of Acting Master.

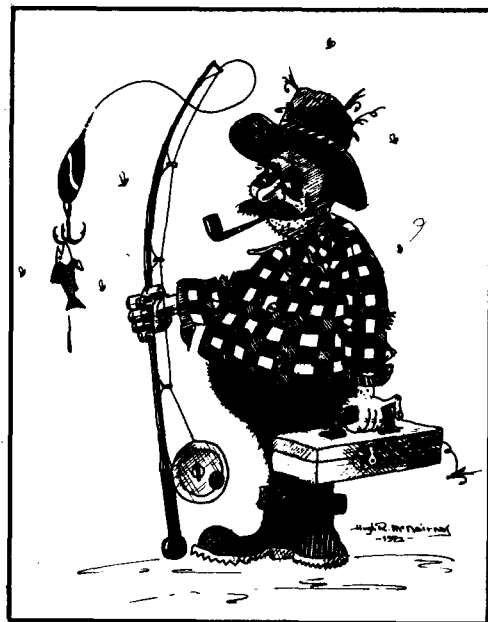
Many of you in the Vancouver office will remember Reg, who served as Acting Chief, Marine Unit, Southern Operations Branch, for one year 1973-74. One of the highlights of Captain Watts' career with Fisheries was the delivery of the Canadian fishing vessel "PROVIDER" to Trinidad in the spring of 1971. This vessel was purchased from John & Nick Brajcich of Vancouver by the Canadian

Industrial Development Agency to assist the Trinidadians develop the shrimp and groundfish potential in their coastal waters.

Captain Watts, was in his 55th year, and is survived by his wife Hazel and three children in Victoria. Our sincere sympathy goes out to them at this time. Captain Watts will be sorely missed by all who knew him. He was held in high esteem by his peers and his kindly friendly manner endeared him to all who had the pleasure to sail with him.

Funeral services were held at St. Martin's in the Field, Anglican Church, Victoria, with the Rev. T.C. Williams, officiating. Pallbearers were Captains, M.B. Gay, R.D. McLellan, W.J. Furlong, A.G. Nelson, Chief Engineer, Mr. S. Service and Mr. A. Snodgrass. The chapel was filled to capacity with friends and shipmates.

"HOME IS THE SAILOR  
HOME FROM THE SEA"



## HOW TO MEASURE TONNAGE

The following is the formula for finding the tonnage of your boat and is primarily used when making application for a small vessel license.

### Gross Tonnage

The gross tonnage of a vessel is the tonnage of the hull plus the tonnage of the superstructure, if any.

### Registered (Net) Tonnage

The registered tonnage is the gross tonnage less the allowance for engine space.

### Computing Tonnage of the Hull

The tonnage of the hull is computed as follows with all measurements being in feet:

$$\frac{L \times B \times D \times .55}{100} = \text{Hull Tonnage}$$

Where: - L - length from the fore part of head of stem to after part of head of stern post (maximum length).

- B - Breadth to the outside of outer planking excluding any moulding or rubbing strake.
- D - depth amidships from under side of deck, or from upper strake of hull planking in open boats, to the upper side of floor timbers at side of keelson. The keelson is a timber connecting floors to keel that are running fore and aft. The floor timbers are the bottom solid transverse timbers connecting the side frames.

### Computing Tonnage of the Superstructure

The tonnage of any enclosed area such as the superstructure above the deck line is computed as follows with all measurements being in feet:

$$\frac{L \times B \times D}{100} = \text{Tonnage of Superstructure}$$

Where: - L - length of superstructure

- B - breadth of superstructure

- D - depth of superstructure

### Determining Engine Space Allowance

The allowance for engine space is computed as follows with all measurements being in feet:

$$\frac{L \times B \times D \times 1.75}{100} = \text{Engine Space Allowance}$$

Where: - L - length of engine space

- B - breadth of engine space

- D - depth of engine space

It should be noted that there is no allowance for engine space for boats propelled by outboard motors.

Reprinted from Canadian Boating, October/November 1974

TELEPHONE, n. An invention of the devil which abrogates some of the advantages of making a disagreeable person keep his distance.

On January 11th, Anne and Dick Crouter hosted a party in honour of Maury Houghton on the occasion of his retirement. The "class of 47/48" was well represented among the 50-odd well-wishers who attended. Tales of Fisheries hijinks and anecdotes

spanning almost 30 years were swapped and the only damper to the evening was the fact that Joe Whitmore, who was scheduled to attend, could not make it due to the snow storm. Maury, and his wife Phyllis, were presented with an Indian carving and wishes for a happy retirement.



Photos by Rod Palmer

# Disappearing Falls !

BY B. ALLEN



Photo by Rick Boyd

PASSABLE TO FISH?

## HOW TO MAKE NATURE WORK FOR YOU

You have to hand it to mother nature, she is continually on the move. Take the case of the Clyak River falls. This falls, in Area 9, has been continually moving around since 1927. Impossible you say?! Not in the least! It is well documented in our very own salmon spawning files. To wit; in 1927 a passible falls was listed in the spawning records as occurring on the Clyak River  $2\frac{1}{2}$  miles upstream from the mouth. The falls decided to go "underground" for the next 17 years and did not present itself for inspection to our F.O.'s again until 1945. There are those who say this was not the original falls, but rather, its big brother Orville. I suppose this is possible as the falls were considerably larger in stature and were now impassable for salmon. Also, in keeping with its increased stature, the falls had moved upstream  $\frac{3}{4}$  of a mile.

For some unknown reason the falls disappeared again and did not come to light until 1948. This time the falls moved back to its original position,  $2\frac{1}{2}$  miles upstream from the mouth of the river.

Now I know you're not going to believe this, but that perambulative falls went and hid up a spruce tree for the next ten years! (As anybody who has been in Area 9 knows, the only place to hide is in the trees.) That's right! It's in the record. The falls were nowhere to be found! At first I thought we had a near-sighted fishery officer at Rivers Inlet. Not so. What really happened was the falls got up and hid on our fellows each time they walked that creek. Yes, apparently the falls didn't like any of the four officers who served in the area between 1948 and 1958.

In 1959 I guess the falls realized civilization was slowly encroaching and there was no use in hiding any longer. Our friend came out of the woodwork and has been out ever since. For two years though the falls moved downstream one mile. In 1970 the falls settled in at a point 3 miles above the mouth of the river and has been there ever since.

"Now what is the point of this exercise?" you are asking. Just this! Area 9 is a deprived area - all we have is millions of sockeye and pinks, the largest chinooks in B.C. (we won't count that stray from Rivers Inlet that turned up in the Skeena a few years ago) and lesser numbers of coho, steelhead, and chums. We have no money making ventures. We don't even have one parking meter or pay toilet! As everybody knows the best way to make money without doing a lick of work is to bring in tourists. Now I propose that we already have a potential money-making venture on hand. Yep! Clyak Fall. Imagine - those New Brunswickers have their Reversing Falls and we have our DISAPPEARING FALLS! I further propose that I be designated the official "falls watcher" (a salary of \$95,000, a house, overtime premium, a COLA clause, and a dental plan will do for a start).

I will promote this unique attraction and guide the hordes of tourists that will flock to the area. What happens if the falls don't move again? But they will! All you have to do is take a look at the past record - it is due to move or disappear at any time now. Even if the falls don't move for a few years, folks still like looking at falling water. Oh yes, one more thing. I want the concession on the pay toilets - everyone knows what the sight of running water does. Migawd!! I'll make a millicn!

B. Allen

(Editor's Note: Are we to conclude that the falls do exist?)

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THE **Sounder**

## PHOTO CONTEST

### E-X-T-E-N-D-E-D

Have our picture taking people become too shy to show off their work? Has the price of film risen to extraordinary heights? Or have Fisheries people become too wrapped up in their day to day activities to bother allowing the rest of us in the Pacific Region to share in their different experiences.

At this time last year over 40 people had contributed 200 photographs to the Sounder Photo Contest. To date this year we have more bottles than entries to the Second Annual Photo Contest.

The photos received play a major role in careers day presentations, group talks, Fisheries publications (both for internal and public distribution), joint Industry/Fisheries seminars, public education lectures, and in stocking a photo library available to all Pacific Region Fisheries staff. Such pictures also provide the chance for all to see how the various departments within the Fisheries & Marine Service, Pacific Region operate and how they contribute to the overall being of the total organization.

However, not only do such pictures provide illustrated information to Fisheries staff, but they also enable us to show the general public, in a very visual way, just what we do for the public dollar.

Therefore, because of the lack of contributors, we have extended the deadline for applications to the Sounder Second Annual Photo Contest from February 4th to 4 p.m., March 10, 1975.

In addition to the wealth of information such pictures provide - prizes have been donated and will be awarded to the best selections for a variety of categories. So those of you who do see fit to contribute will be rewarded - good booze of your choice.

The categories established to date are:

- single theme scripted slide talk
- Fisheries on the job
- Fishing Industry on the job (gear, people, communities)
- Fish resource interactions with other resources (plus or minus)
- Humour
- Fish-related recreation
- Best colour photo
- Best black and white photo.

To be eligible for prizes submit your best photos (slides or prints, colour or black and white) to the SOUNDER, Fisheries and Marine Service, 1090 West Pender Street, Vancouver, B.C. V6E 2P1 by 1600 hrs., March 10, 1975. Please include your name, return address, a comment on the subject(s) of photo(s) and the categories you wish to enter. Think about it and then do it.

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## WHY NOT !

Have you ever thought about staff development? You know, a planned staff improvement program. Yes? What would be the impact of:

1. selection of staff to specific criteria and guidelines;
2. a basic job and organization orientation program for new employees;
3. "on the job" experience, guidance and training;
4. working with universities and technical institutes to train students to meet our needs;
5. a cyclic system of "sabbaticals".

The sabbatical system is one which grabs me. If work assignments were from two to five years, at the end of that time the employee would go on a six to twelve month working sabbatical. As the sabbatical would be for staff development, the employee and his boss could decide what experience the employee needs. The employee might attend a university or technical institute "re-tread" program or work on planning, forecasting or training, or work as a technical advisor to industries such as aquaculture or sea ranching. Six to twelve months away from a regular job should improve objectivity and awareness of what the organization is about.

What if we adopted a policy like Alaska's where staff can negotiate a study of their choice to conduct alone with other activities (they aren't as overworked as we are). These special projects have generated real interest.

Far out? Maybe, but this type of thing is going on around us; often in some sectors where you would least expect it.

# NOB TRAINING

January training literally started off with a bang - to the sound of thirty feet of primachord, in a deserted quarry.

First in a series of five courses, Blasting Technology took 2 days to complete by thirteen NOB people in a seminar/workshop. The course was taught by John Moore, blasting examiner of the Workers Compensation Board (Vancouver), with assistance from his Terrace counterpart. Attendees included a mix of fishery officers and technicians, who upon completion took written and oral examinations for a certificate of competency.

Next came one of the most ambitious projects yet undertaken in NOB training: a two-day Marine Safety Course, moderated by Jack Gosse. Day one was divided into Fire Safety and First Aid, whereas day two was devoted entirely to Water Safety.

Fire safety included a lecture and demonstration by Wayne Harrison, Prince Rupert Fire Chief, and John Green, Prince Rupert steamship inspector. Format included films borrowed from MOT and Vancouver Vocational School, and practical experience using extinguishers and marine flares by each attendee.

First Aid was taught by Dr. John Schinbein of Prince Rupert with three able assistants from St. John Ambulance, and involved practical participation.

Water Safety was split into two parts: A public lecture in the Totem Theatre by Dr. John Hayward of University of Victoria, on "cold water survival" outlining the results of his research, the most advanced in the world in this field; and participation of volunteers in the Civic Centre Pool inflating, boarding, handling and righting liferafts.

Attendees for the Marine Safety Course included a mix of everyone in Fisheries who could attend: vessel cooks, engineers, mates, masters, technicians, fishery officers. Jack Gosse's able team of volunteers for "in-pool" demonstrations was composed of Ron Pasiuk, Ron Crist, "Tiny" Campbell, Ed Christiansen, Phil Lloyd, John Lewis, Adrian Brazil, Kevin Delaney and Henry Avramenko.

It is believed that this was the first time cooks and engineers have been invited to attend training courses.

The next three courses represent a growing awareness in the art of using sounders and sonar in locating and evaluating fish stocks. No courses of their type are available anywhere else in North America. Included in the format was technical knowledge of the equipment, operating techniques, and attempts to establish a standard method of search.

Peter Ryan was the moderating instructor of Sounders and Sonar 1, 2 and 3, with valuable assistance from Rick Boyd on aspects of search procedure; and Alf Wiebe, Charlie Warburton and Captains Bill Wiley, Jack Gosse, Coleman Carey and Ken Harley on practical operation of equipment.

Sonar 1 was a brush-up for people who took the pioneering course last year; Sonar 2 was a 4½ day seminar/workshop for people who haven't had it before; and Sonar 3 was designed as an overview for District Supervisors and HQ personnel who wish to keep abreast of the rapid developments in fish finding technology and technique spearheaded by Peter Ryan and Rick Boyd with Lloyd Webb assisting for part of the course.

Assisting Peter from "outside" were: Nathan Roundy from Wesmar, Seattle; Peter Hatfield, naval architect; John Green (CSI); and Carl Haegar from Pacific Biological Station.

Attendees included masters, fishery officers, mates, technicians, totalling twenty-five. For the first time, Southern Operations asked to send along participants to Sonar 2. Accordingly, Captains Bob Walker, Gordy Nelson, Joe Thompson, John Waddell, and Bob Davis came along, and through their collective knowledge and expertise, helped to make Sonar 2 the success it was.

So as to get maximum utility from training "plant" and transportation cost, all courses were designed to run consecutively. Held in Prince Rupert, training courses used rented space and a makeshift theatre at the Marine Base. Ships Cutter Rock, Surge Rock, Sooke Post and Kitimat II were seconded as "school ships" and integrated into the program. Prince Rupert was selected because of its proximity to herring stocks, central location, and availability of training accommodation and equipment.

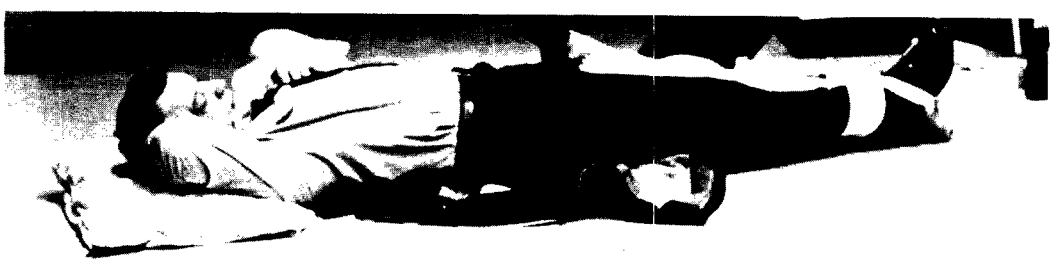
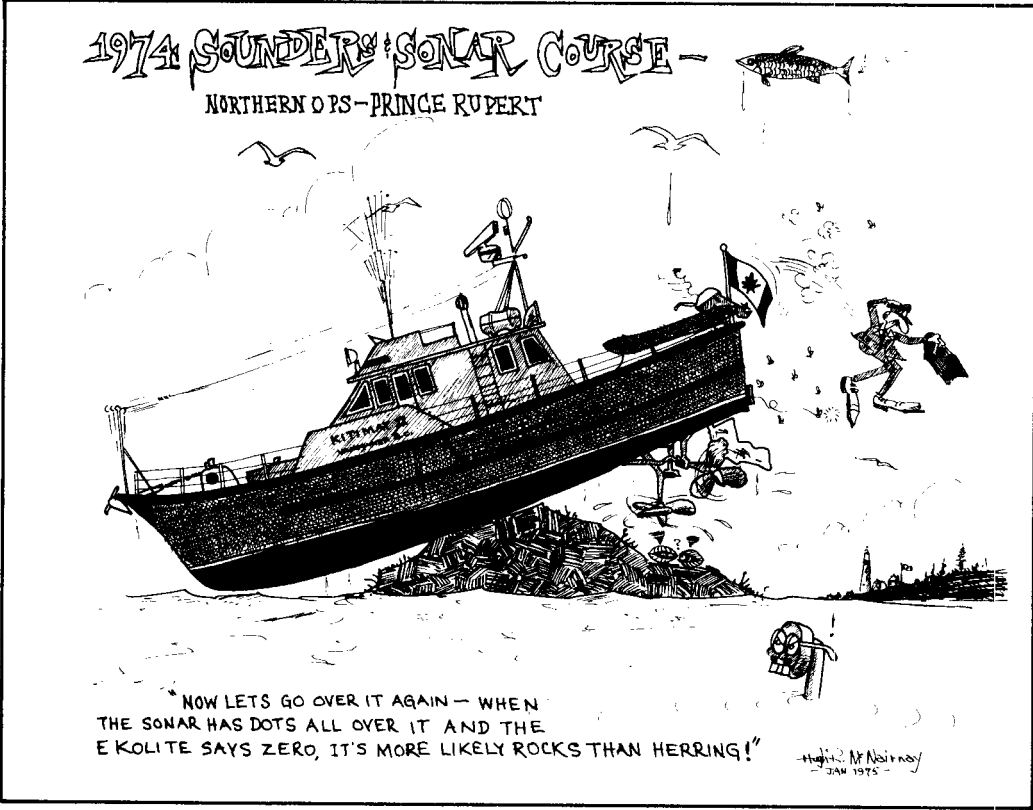
This year, because of the large numbers of attendees needing a variety of transportation, NOB rented two busses. These units were kept busy on a pre-arranged schedule for ten consecutive days. Peter Ryan and Alf Wiebe took turns driving the U-Drive bus, and George Barber drove the 22-passenger bus. None of the passengers actually died of fright, even though the busses operated throughout varied and bad Prince Rupert weather.

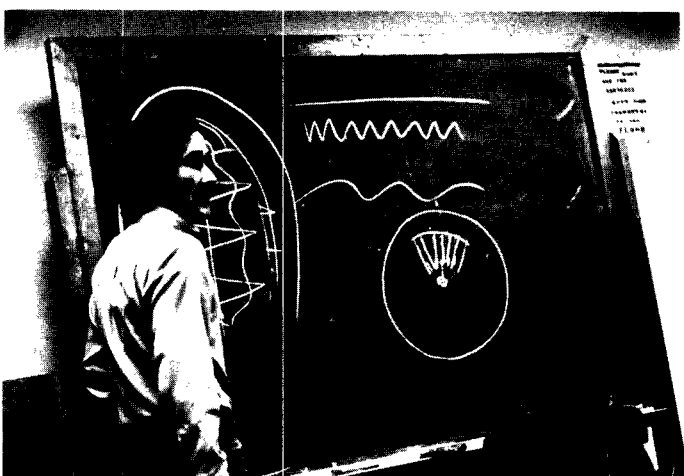
The sixty or so Fisheries people participating in the January NOB training series proved once again that Fisheries and Marine has some of the finest expertise in the world within its ranks.

Planned for the future, is a series of seminar/workshops in "Resource Problems", a "beefed up" first-aid training program, and an expanded and innovative law and enforcement training program using the best inputs available.

George Barber

# Scenes From the N O B Training :-





## Spurious Emissions

Now that EPS has vacated 1090 West Pender we are going to pick up their space (on main, 3 and 11). An action group headed by Warren Parkinson is now working out a general plan. Each group will have an opportunity for detailed input. See your immediate boss or your rep. (D. Deans, NOB; O. Rapp, SOB; D. Kerr, Admin. groups.)

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A follow-up on that story in many papers recently, regarding the Atlantic salmon at a water intake in the Thames River in London - "The Thames has been a graveyard for fish for about 150 years. But in the last ten years seventy-three species have been caught." Also, the Port of London Authority has offered a 500 Pound prize to the first angler to catch a salmon or sea trout in the Thames.

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A quote for thought:

"If the government becomes a law breaker, it breeds contempt for the law; it invites every man to become a law unto himself; it invites anarchy." Justice Brandeis, 1924.

Think about it!

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If anybody is interested, copies of those full centerfold pictures (2) which appeared in the last few issues of the SOUNDER are available. Anybody interested in these pictures as posters or handouts can get them by writing to the SOUNDER - please specify if you want them folded or not.

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Dr. Geen, our new Regional Director-General, says he does not intend to make any organizational changes without extensive thought and discussion. Now you can ignore those rumours, frightening or otherwise for another month or so.

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Barbara and Bob Morgan left the organization (retired) at the end of December to become secretary to the secretary, respectively, of the Vessel Owners' Association.

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The new eye-catching person on the 10th floor is Elsemarie Wilson, an SI to Chris Newton's Economics and Intelligence Branch.

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Art Miller of the Vancouver Inspection staff has retired from the organization.

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Dick Arnott has moved to the Environmental Management Service as their Regional Financial Accountant - oh those greener pastures.

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Wilf Eddy, Gulf of Georgia engineer, has transferred to a position with Indian Affairs.

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Gladys Moore has left our library for a leisurely retirement.

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Jack Broome is on his way from his Dawson's Landing posting to one in Sandspit.

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Rumour has it that Dennis Deans went beering in a Boston pub.

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It's amazing the number of people leaving the organization but even more amazing is how few new people are reported coming to the organization.

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As has been quite obvious in the last few issues, the SOUNDER is short on input from the field people - severely short. The SOUNDER and the Region wants your news - whether it is a one-line spurious emission, a paragraph or page. We would like to run a series of articles about all the different Fishery Officer locations - both as general information and as information to Officers considering applying for positions at these sites. Picture stories of Fisheries activities are easy to do and of special interest - whether a single picture or a multi-page spread.

We would like to start columns of interest to the readership - any suggestions?

Any input!

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## NEW FACES

John Burns, Quantitative Sociologist, has joined the Social Science Unit, Southern Operations Branch.

Steve Enos is our new Financial Officer.

Stanley Wallace replaces Dick Arnott as Financial Officer, Small Craft Harbours Branch.

# LETTERS TO THE EDITOR



I see Maxine has taken her net & trident up to a new "fishing arena" at Yellowknife to do battle with a different set of problems. Wherever she is and whatever she does our heartiest best wishes go along with Maxine. May her muk luks fit warmly, the frost never bite; until the ice worms nest again!

The enclosed newspaper clipping is taken from the Parksville-Qualicum Progress, our local newspaper in this sector of Vancouver Island. The Parksville-Qualicum area is in the throes of rapid and large-scale land development and the recent "relative growth" of population etc., is second only to the Kelowna-Rutland area in B.C. according to recent "stats" of D.B.S. & Province of B.C. information. The rapid expansion presents acute problems with regard to domestic water supplies and the still unresolved impasse concerning domestic sewage disposal.

Dr. John Ryther & Dr. Cameron Gifford, staffers at the Woods Hole Institute of Oceanography have developed a functional pilot project which they allege can turn sewage into dollars in the appropriate seaboard location. Hopefully their researches could be profitably applied in this salt water spa area and perhaps in other sectors of Georgia Strait.

Regards & Cheers,

Andy Skipper

## A TALE OF SEWAGE AND AN OYSTER

Take a bucket of sewage, some algae, some seaweed, some seawater, and a few oysters, combine them and what do you have?

Some algae, some seaweed, some fresh and saleable oysters, and a bucket of water as clean as the sea itself. Farfetched? No, not according to some scientists at Woods Hole Oceanographic Institute in Massachusetts and local federal fisheries officer Andrew Skipper.

Skipper saw an article about a pilot project at the institution combining those ingredients and he suggests that it might be worth looking into for District 69 sewage problems.

"We've got all the basic ingredients here," says Skipper. "We've got the seaweed, algae, bivalves, seawater, and the people. And we have a fairly urgent pollution problem."

## TREATMENT STAGES

Appearing in the periodical Science News, the article says that primary treatment of sewage takes place when the heavy solid matter is settled out. Secondary treatment is the removal of most of the organic matter, and this has been made profitable. The matter can be digested by bacteria in special tanks producing a saleable fertilizer.

Now, the scientists believe tertiary treatment can be made profitable. In tertiary treatment most of the dissolved inorganic compounds should be removed.

Woods Hole scientists John Ryther and Cameron Gifford have a pilot plant in which inorganic compounds are removed by using them to grow algae which feeds oyster in the same tank. Finally, seaweed is used to remove traces of nitrogen and phosphorus compounds and the waste products of the oysters. What remains is water clean enough to be dumped back into the sea, the scientists say.

One of the men estimates that a facility large enough to provide tertiary treatment for a town of 50,000 could bring in an estimated income of \$4 million or \$5 million a year. That's at east coast oyster prices, which Skipper says are higher than prices here.

## A FEW PROBLEMS

Several problems have yet to be worked out of the idea. The first is that viruses may live through all stages of the treatment and end up in the oysters. Woods Hole scientists are "confident" that this problem can be solved, says the article.

Another problem is that heavy metals and other toxic substances are difficult to eliminate and would become concentrated in the oysters and seaweed.

Skipper doesn't think this is a problem here. "We don't have chemical pollutants in our water," he says, adding that pulp mills are too far away to affect District 69.

## FAST MATURING

One advantage of the problem is that oysters on the east coast can be brought to maturity in 12 to 18 months, compared with the four or five years required in the sea.

Skipper says that the area from Dorcas Point near Nanoose to Shelter Point near Campbell River is considered the best oyster culture area in British Columbia. The profitable Olympic oyster, native to these waters, grow in small quantities off these shores, and the common larger oyster, originally from Japan, are everywhere.

"We have an opportunity here to convert something like sewage that's a nuisance and a health hazard to something useful. What we need now is some creative thinking," says Skipper.

Should I praise first or complain first?

I really must complain first. I am still squirming from embarrassment at seeing my name on the last page of the Nov.-Dec. "Sounder". Your readers can only think that I contributed the poem, and that I passed it to you claiming I had written it. This, as you and I and your readers know, is patently and outrageously false. Perhaps you put my name under the poem in a misguided (very misguided!) sense of kindness - I don't know. I only know that I am very upset at being made to look like a plagiarizer (or plagiarist). Please correct this false impression in your next issue.

Now, for the praise. I think the Nov.-Dec. "Sounder" is the best you or any previous editor has published.

I liked your series of articles by the Big Three - Hourston, Crouter and Palmer. They all tied in so well, I'm sure you coached them on their "homework assignment".

"Fish Fare" by Donna Aldous was refreshing, as usual. It wasn't until I had read the article that I had noticed its length. But it was definitely worth every inch.

Last but not least, the art work, layout and design of this "Sounder" was really impressive. If that's your work, Allen Chan, I congratulate you. You really are making some wonderful improvements.

That brings me to criticism. Good work, such as yours and Allen Chan's deserves credit, and recognition. Starting in the next issue, please remember to include the names of the editor and the layout man.

Keep up the good work!

Maxine Haugen

*(Our sincere apologies for crediting or dis-crediting you with the poem that appeared on the back page of the November/December SOUNDER. We're sorry our mistake reflected badly on you.)*

*Apologies also to all those readers who didn't get a copy of the Christmas issue of the SOUNDER. Due to an under-run by the printer of over a 100 copies, distribution was rather limited to Vancouver staff.*

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BRAIN, n. An apparatus with which we think that we think. That which distinguishes the man who is content to be something from the man who wishes to do something. A man of great wealth, or one who has been pitchforked into high station, has commonly such a headful of brain that his neighbors cannot keep their hats on.

The attached clipping is submitted by Fishery Officer J. Hipp of Chilliwack. He came across it in his files. It is interesting to note that in 1948 there were 54 Fishery Officers and in 1974 only 72. The population of British Columbia in 1948 was approximately 817,000 compared to two million in 1974.

Lyle Freeman

#### FISHERIES BRANCH ADDS 13 VETS TO RANKS OF INSPECTION SERVICE

Preservation and advancement of British Columbia's great fishing industry is the new career opening for 13 young veterans, who last week completed an extensive training to fit them for the duties of fisheries inspectors on the far-flung coast and hinterland.

When the young men go out to their posts the federal fisheries department will have a corps of 54 inspectors on the coast, constantly on the alert to see that fisheries regulations are obeyed. Some will serve aboard patrol vessels, some will take to the air, some will be based at the headwaters of salmon streams.

Their job is not entirely devoted to policing. Practical knowledge of every aspect of the fishing industry is required.

Since last July they have been studying to qualify in the fisheries service.

#### FIELD SERVICE

For four months they were out on the field as assistants, learning at first hand the practical duties of their jobs.

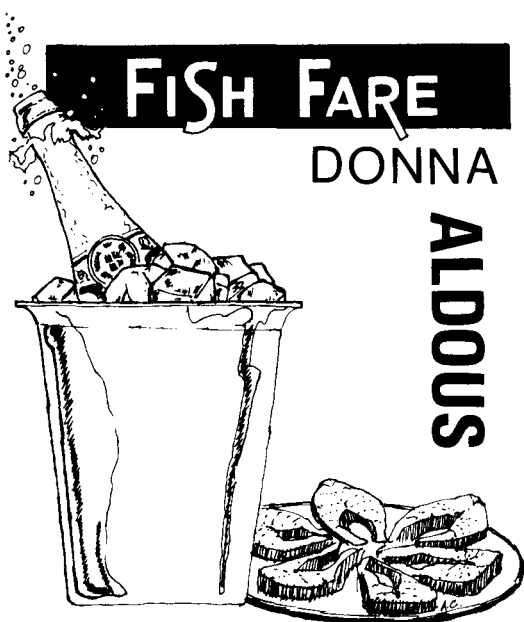
Six weeks ago they came to Vancouver to begin an extensive course of lectures at the office of the Chief Supervisor of Fisheries, which culminated with written examinations this week.

Experts in every branch of the fishing industry contributed their technical knowledge to the course.

Eminent scientists from the Fisheries Experimental Station at Vancouver and the Pacific Biological Station at Nanaimo, gave lectures on every aspect of the fishing industry, from whales to halibut, salmon, shellfish and seaweed. They learned the life habits of fish and how they are processed and sold.

They learned how to repair marine engines, the rudiments of navigation, the administration of the Fisheries Act, the preparation statistics and the rules of evidence. They were taught first aid and the handling of explosives.

Now with their training completed, they are ready to play an important part in the advancement of the fishing industry.



All right. So you planned to take off those extra pounds this year. So you made your resolution. No more nibbling snacks. No more fattening desserts. No more second helpings - a sensible diet this time, you said. Here it is, February already, and ... Well, we all suffer from temptations. What's worse, sooner or later the mere mortals among us give in, backing up our decisions to indulge with all sorts of rationalizations. "Oh well, just this once won't make any difference ..." or "If I eat this, I'll walk down to lunch and back instead of taking the elevator" or "I'll skip the next meal, and enjoy this one for a change". It won't work, folks. As Napoleon once said, "Everyone out on the field. This one's only Waterloo."

There is one pleasant way to cut calories. If you eat lots of food make certain that every morsel is of the low-calorie variety. Satisfy your cravings with raw vegetables, fruit, bouillon, or juices, and eat fish! One well-known and highly successful weight control group recommends fish and shellfish at least four times a week in main meals. It is satisfying, high-quality protein and very low in calories. As one wag put it: "How can anything that tastes so good be so good for you?"

The following ideas come from the leaflet "Seafood Recipes For Calorie Counters." It is not available at the moment, as it was so popular it "sold out" and is now being re-printed.

#### ONION SOUP AU POISSON

- 1 pound fish fillets  
(cod, haddock or sole)
- 4 cups sliced onion
- 1 tablespoon melted butter  
or other fat
- $\frac{1}{2}$  teaspoon salt
- $\frac{1}{8}$  teaspoon pepper
- 4 bouillon cubes  
(beef or chicken)
- 4 cups boiling water
- 2 tablespoons grated Parmesan  
cheese

Cut fillets into bite-size pieces. In a covered saucepan cook the onion rings in butter, over low heat, until tender. Season with salt and pepper. Dissolve bouillon cubes in boiling water, and add to onions. Bring to boiling temperature, stirring constantly. Add fish and simmer until fish flakes easily when tested with a fork, about 10 minutes. Garnish with cheese. Makes six 6 ounce servings - approximately 130 calories per serving.

Select cooking methods carefully, and avoid frying. Fish may be broiled, steamed, poached or baked in many delicious variations without adding "extras". Do not use sauces that sneak in extra calories.

Chinese "stir-frying" is a good way to cook, using a minimum of fat. Vegetables are cut into small pieces and cooked only until "crisp-tender". This retains the maximum food value, provides quick meals, and economizes on fuel as well!

Cantonese Shrimp and Beans makes an excellent company meal if you are planning to entertain fellow dieters, as it provides 6 servings of 200 calories per serving.

#### CANTONESE SHRIMP AND BEANS

- $1\frac{1}{2}$  pounds shrimp, fresh or frozen
- 1 clove garlic, mashed
- $\frac{1}{4}$  cup thinly sliced green onions
- 1 tablespoon oil
- 1 cup chicken broth or 1 chicken  
bouillon cube dissolved in  
1 cup boiling water
- 10 ounces cut green beans, fresh  
or frozen
- few grains pepper
- 1 tablespoon cornstarch
- 1 tablespoon cold water
- $\frac{1}{2}$  teaspoon ginger

Thaw thrimp if frozen. Peel and remove sand vein from shrimp. Saute shrimp, garlic and green onions in oil for 3 minutes, stirring frequently. If necessary, add a little of the chicken broth to prevent sticking. Stir in ginger, salt, pepper, beans and the rest of the chicken broth. Cover. Simmer 3 minutes longer, or until beans are cooked but still crisp. Combine cornstarch with cold water; stir into shrimp mixture; simmer 1 minute longer. Makes 6 servings - approximately 200 calories per serving.



Often seafood recipes call for mayonnaise with is tabu for weight watching. Instead, you may substitute this recipe, called "Almost Mayonnaise". You will find it remarkably close to its fattening cousin, but it offers a mere 15 calories per tablespoon. Keep a jar handy in your refrigerator.

#### BASIC SEAFOOD SALAD

2 cans (4½ to 6 ounces each)  
crab meat, lobster or shrimp -  
or -  
2 cups cooked fish or seafood  
1 tablespoon lemon juice  
1 cup celery crescents  
1/3 to ½ cup Almost Mayonnaise  
Salad greens

#### ALMOST MAYONNAISE

1½ teaspoons sugar  
1½ teaspoons dry mustard  
½ teaspoon salt  
1/8 teaspoon paprika  
1½ teaspoons cornstarch  
1/8 teaspoon onion salt  
1 egg, slightly beaten  
½ cup buttermilk  
1 tablespoon butter or other fat,  
melted  
½ cup vinegar

In the top of a double boiler, mix the sugar, mustard, salt, paprika, cornstarch, onion salt. Add egg and buttermilk and stir until smooth. Cook over hot water until smooth. Cook over hot water until mixture begins to thicken. Add butter and vinegar gradually, beating well after addition; cool. Makes 1½ cups - approximately 15 calories per tablespoon.

Drain seafood if necessary and pick out any pieces of shell or cartilage. Remove sand vein from shrimp. Break seafood into chunks and sprinkle with lemon juice. Add celery and "Almost Mayonnaise". Toss lightly to mix. Season to taste. Chill. Serve on salad greens. Makes 4 servings - approximately 100 calories per serving.

Broiling steaks, fillets, or small whole fish can be improved with the subtle addition of fruit juices or herbs to add flavour and colour. Halibut is in low supply, but is available if you shop diligently. The delightful flavour and texture of halibut make it much sought after, but well worth the effort.

#### ORANGE BROILED HALIBUT STEAK

2 pounds fresh halibut steaks  
(1 inch thick)  
½ teaspoon salt  
1/8 teaspoon pepper  
1 orange  
1 tablespoon butter

Season steaks with salt and pepper. Blend juice of one half orange with butter. Cut remaining half in thin slices. Brush halibut steaks with one half of the orange butter. Set them on greased broiler pan, 3 or 4 inches from heat. Broil 5 minutes, until steak is brown. Turn, brush

with remaining orange butter and broil five more minutes or until fish flakes easily when tested with a fork. Garnish with orange slices. Makes 6 servings - approximately 200 calories per serving.

A new low-calorie fish cookery leaflet is available, from the B.C. Fisheries Association. It is called "Inches Away", and may be obtained, free of charge, by writing:

Inches Away  
P.O. Box 33798  
Postal Stn. D  
Vancouver, B.C.  
V6J 4L6

## THINK THE METRIC WAY

Canada is committed to the adoption of a new set of units of measurement. Most Canadians will need to become acquainted with a new way of describing distance, volume, mass(weight) and the other quantities. Distance will cease to be expressed miles, yards, feet and inches and will instead be measured in metres and decimal multiples and submultiples of metres. Litres will take the place of the familiar pint, quart and gallon, and the many products now sold in ounces and pounds will be offered in grams and kilograms, again with the multiples and submultiples for larger and smaller volumes and weights.

The increasing ease of transportation and communication and the growing volume of world trade in recent years have served to focus attention on the desirability of a universal system of measurement. Canada, in particular, is vitally dependent on foreign trade for the health of the national economy and must be prepared to supply its goods in the manner that importing countries desire. With the exception of the United States, Canada's leading trading partners are either long-established users of the metric system or are at present embarked on a changeover. Quite apart from the demands placed upon Canada as a producer and supplier of good and services, there has also been a desire for a system of measurement which, by eliminating non-standard weights and measures and the complexity of common fractions, would make life easier for the Canadian people.

Today, almost 95 per cent of the world's population uses or is converting to SI (from the initial letters of the French title - *Système International d'Unités*). Although it is not intended that compulsion to convert will be exerted officially on any sector of the economy, the Canadian government has adopted the principle that all facets of Canadian life will eventually conform to SI standards and is providing the necessary encouragement to enable the changeover to be substantially complete by 1980.

SI is built on a foundation of seven base units and two supplementary units. Two of the most commonly used base units are length, measured in metres, and mass\*, (weight) measured in grams. The other important units are time, measured in seconds, and electric current, measured in amperes. The remaining three units relate to temperature, measured in kelvins; luminous intensity, measured in candela; and amount of substance, measured in moles. The two supplementary units are the radian, which measures plane angles, and the steradian, which measures solid angles. With these units it is possible to derive all other measurements in SI and derived units are expressed algebraically in terms of the base and/or supplementary units. For example, area is measured in square metres, volume in cubic metres and density in kilograms per cubic metre. Many of the derived units, especially those of frequent and common usage, have special names. The decimal base is another important aspect of the metric system. When the base units, or derived units, are inconvenient in size for a particular measurement, multiples are used for large measures and submultiples for small measures.

While the SI unit of temperature is the kelvin, the degree Celsius is the commonly used scale for temperature measurement. A simple system, it is based on a freezing point (water) of 0 degrees and a boiling point of 100 degrees and is named after its inventor, Anders Celsius, a Swedish astronomer who lived between 1701 and 1744. Some of us have known this system in the past as the Centigrade scale but, in 1948, the International Standards Organization decided to replace it with the degree Celsius to avoid confusion in countries where a "grade" is a plane angle and a centigrade 1/100 of that angle.

\* SI insists on making the distinction between "mass" and "weight". Mass, which SI measures in kilograms (kg) is the quantity of matter contained in a body. Weight, the weight of a body, is the force exerted on its mass by the pull of gravity. Force is measured in newtons (N). A newton is defined as that force which produces unit acceleration at unit mass.

As already mentioned, the basis of the Canadian approach to metric conversion is that it is a voluntary process. A corollary of this is that each segment of the economy is expected to identify the opportunities for change and to bear its own changeover costs, just as it will reap the benefits arising from the change.

The initial costs of Canada's conversion to metric will undeniably be high and the main direct burden will fall on industry. Tangible costs include modification of equipment and other physical changes; intangible costs cover such aspects as retraining and education of workers. However, experience in other countries has demonstrated that these costs are not usually as high as expected.

Regardless of cost, the government feels that the resulting benefits will more than compensate for the capital outlay necessitated by the conversion to metric. While the costs and inconvenience will be temporary, the benefits will continue indefinitely. Aside from the advantage of enhancing Canada's future in international trade, the conversion to the metric system is expected to yield substantial savings and increased productivity throughout the economy. The streamlining of obsolete and inefficient procedures and the rationalization and standardization of products into a more logical range of sizes can be responsible for many savings in industry. Important potential benefits arising from the simplification of calculations include improved administrative procedures and improved communication with suppliers and customers. Educators are especially enthusiastic supporters of the metric system. Metric measures are simpler to teach and learn and the time saved by the teachers can be used for other subjects.

During the late 1960's, the benefits to be gained from conversion to the metric system became increasingly evident in Canada and groups of interested citizens began pressing for action. In response to this concern, the federal government issued a White Paper, in January, 1970, setting out the basic principle that conversion to the metric system was both inevitable and in the national

interest. In June 1971, the Commission for Metric Conversion was established. These steps have been followed by the Weights and Measures Act, which defined the metric units to be used, and the Consumer Packaging and Labelling Act, under which producers of pre-packaged foods are required to include a quantity marking in metric units on the label.

The Metric Commission was given the responsibility of coordinating the development of a workable plan for conversion to the metric system while simultaneously providing programs of information and education aimed at increasing awareness and understanding of metric measurement and the reasons for its adoption in Canada.

The Commission has set itself a four-phase program - investigation, planning, scheduling and implementation:

Investigation: Begun in 1971, this phase should be complete by the end of 1974. The Commission has initiated and undertaken studies, investigations and surveys to identify the opportunities and problems relating to metric conversion and the means of tackling them.

Planning: This involves the activities to be undertaken within each industry or field of endeavour - discussion and agreement on the units of measurement to be used, preparation of a program covering all necessary procedures and the timetable for the actual conversion. This phase should be substantially complete by the end of 1975.

Scheduling: While no deadline has been set for Canada's full conversion, target dates for metric usage are being assigned so that each industry or field of endeavour can be coordinated with all other sectors. Commencing on April 1, 1975, the temperature may be given only in whole degrees Celsius and from the beginning of the following September, forecasts of rain and snow may be given in millimetres and metres. During September 1977, almost all the speed limit and distance signs on the main provincial highways will likely be changed to metric units.

Implementation: Some implementation has already occurred. For example, over 80 per cent of all hospitals have already adopted or are in the process of adopting the metric system. Implementation is expected to reach its peak in 1977 and 1978 and, by 1980 most plans are expected to be in operation.

Metric conversion does not mean simply replacing Imperial measures with the metric equivalent. It means the adoption of metric standards which assign convenient rounded-off metric measurements to each unit. However, time for familiarization and assimilation is being allowed. Right now, the consumer is being gradually exposed to the transition process.

The conversion to the metric system is happening in Canada. Its effects will touch almost every aspect of Canadian life but it will provide the advantages of a system that is both simple and almost universal.

Excerpts from "Commercial Letter"  
Canadian Imperial Bank of Commerce  
Nov./Dec., 1974

## MORE POEMS

By Dave Harding

At Fulton channel you will see  
Many a spindly little tree  
Planted at the channel side  
(From fame he can no longer hide)  
By Fisheries' Dan de Montreuil.

The coho return to the Cap  
Has Keith Sandercock in a flap  
From 1090 Pender  
He has called for a tender  
To take 10,000 fish from the trap.

At home on T.V. or on the air  
Is the north's economist Bill Sinclair  
On Kemano II,  
and Lakelse too  
He turns out reports with an obvious  
flair.

There was a fish moocher named Todd  
Who'd mooch fish even from God  
He returned from a trip  
With a box on each hip  
14 salmon, 12 crab and 6 cod.

George Wilson builds boxes for rock  
The male chums are in for a shock  
At Inches and Blaney  
They won't be getting any  
For George has the femmes under lock.

Bryan Allen on an acid trip went  
With some samples Russ Hilland sent  
The acid perchloric  
Made Lillian choleric  
"The stuff could make us all  
heaven-bent".

An H. P. Biologist, Bird  
Said "I think it's really absurd  
And I'm sure you'll agree  
When you talk System E  
With Phil Meyer to get in a word".

B. Q. has Jerry and Dick  
Enhancing the runs to the crick  
The ponds by Burrows  
For chinooks and cohos  
And channels for chums do the trick.

### THE **Sounder**

Kate Glover, Editor  
A. Chan, Layout  
1090 W. Pender St.,  
Vancouver I, B. C.

Opinions expressed herein do not  
necessarily reflect Fisheries  
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# Sounder

March – April 1975 Vol. III No. 2

Fisheries and Marine Service



## Herring Roe Fishery – 1975

In all probability there is no harder fishery to manage anywhere, than the Roe Herring Fishery off the coast of British Columbia. No where are openings and closings of areas so rapidly decided; where division of catch between seine and gillnet so important; or where availability and maturity of the stocks so unpredictable for man. The "man in the field" becomes the "man of the hour" and it is his decisions which will affect the fishery for years to come.

Working in the operations room, one becomes acutely aware of this fact - the importance of and the sheer dependence of that "man in the field". So much of what we, as an organization, accomplish is entirely dependent on the training, intelligence and basic inherent instincts of these men.

However, with phones ringing; Division Chiefs asking for latest field information; radio transmissions constantly blaring in the background, fishing companies demanding to know when areas are going to open or close, what gear is where and how much has been taken; with vessels sinking left and right; relatives asking the whereabouts

of husbands, fathers and sons; the announcing of openings and closings; and the total lack of ability to accurately predict what will happen even 3 hours hence; all make for the operations room to be an extremely important but hectic place. Not intending to take anything away from the main in the field, it is we who have to account for not just one individual area but for the operations of the entire coast. Because we are in the middle and responsible for relaying information to the field, the managerial staff and the public, we get the "flack" from all sides. The Ops Room may not be that demanding a job physically, compared with non-stop 24 hour/day service in the field, but it too certainly has its exasperations and inevitable frustrations.

Enough of beating my own drum. When first asked to write an article on the herring operation for 1975, the writer's first reaction was, "God no, I don't even want to hear the word herring for another year." But as you may imagine female persuasion knows no bounds.

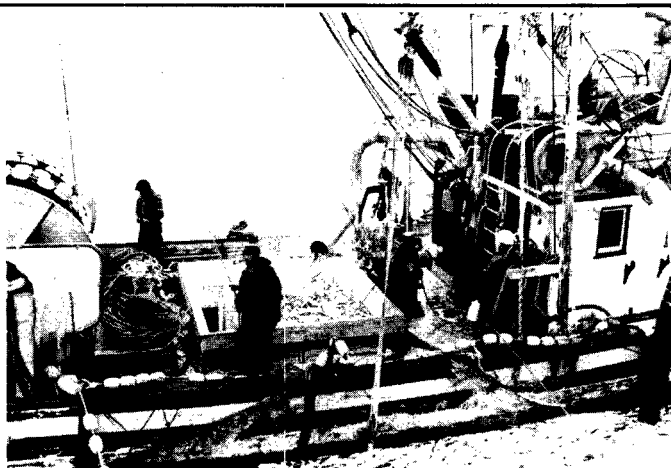
Consequently, the Roe Herring Fishery for 1975, began inauspiciously enough 2 p.m. Sunday, February 16 with the opening of Area 18 in the Strait of Georgia. This first operation consisted of about 40 gillnet punts taking approximately 4 tons of herring from Long and Ganges Harbours. With a theoretical quota of 62,500 tons to accumulate, we were off to the races.

The herring operations was stepped up the following week with the opening of the West Coast of Vancouver Island (Areas 23 to 27) and Area 17A in the Strait of Georgia to gillnets only. After one day, 28 gillnets had taken 184 tons from Area 23 and 11 gillnets had taken 13.5 tons from Area 17A.'

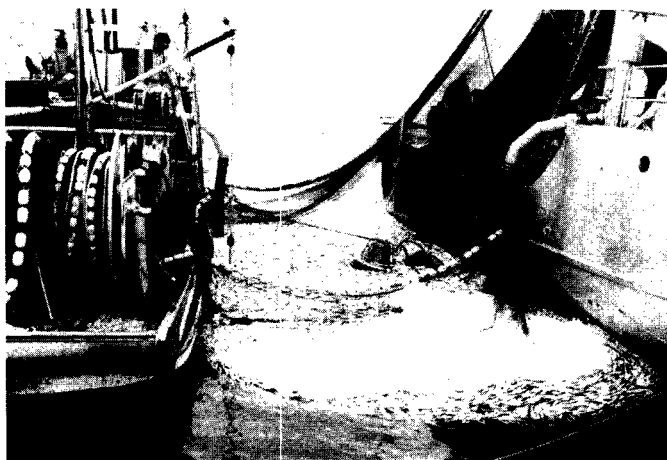
The first seine fishery began off the West Coast of Vancouver Island, at 2 p.m. Sunday the 9th of March, to be followed by the opening of the Upper East Coast Herring Sub-district and the Queen Charlotte Islands on March 16. By the 14th of March, 5,578 tons had been taken mainly from the Lower West Coast of Vancouver Island. Thus, in 31 days the herring tonnage had risen slowly to amount to over 1/3 of the total quota. During the following 12 days, the most extensive fishery occurred and the quota was rapidly approached.

In just one day, from March 19 to 20, an additional 7100 tons was taken, mainly from the Lower Central Area and the Upper West Coast of Vancouver Island. By the 24th of March, in a mere 4 days, the total herring caught had almost doubled, standing at 46,800 tons, leaving only 15,000 tons to go. As an example of the problem of trying to manage such a rapidly changing fishery, the West Coast of Vancouver Island alone, had contributed 31,380 tons of Roe Herring to the coast wide total. Representing half of the quota such a figure shows the intensity with which an area can be fished. The problem being, was it too much of a catch or were the other areas not producing to the predicted extent. As a result of harried meetings and many phone conferences, the area was closed down for the season 2 p.m. Friday, March 28. In less than 3 weeks, half of B. C.'s total expected quota had been taken from this one herring sub-district.

By the 31st of March, seine operations in the Queen Charlottes and the Lower Central Coast had contributed a



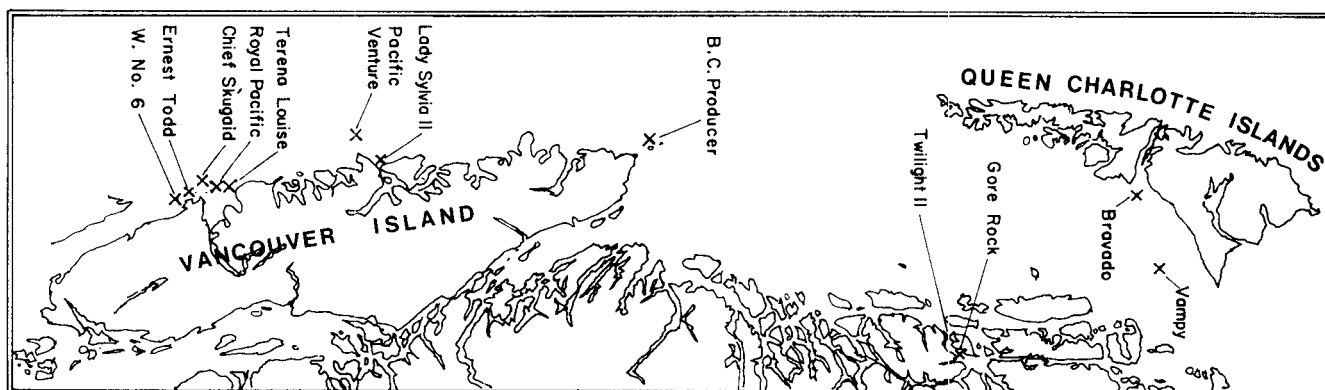
total of 11,000 tons and the quota stood at 57,000 tons. All that remained was a clean-up fishery to obtain the remaining 5,000 tons needed to reach the quota of 62,500 tons. This would come from small operations in Johnstone Straits, Upper Central and Northern Coasts. It is a measure of man's instincts and training as to whether he is making the right decisions at the right time. Such an unpredictable fishery, as the one just described, provides the greatest test.



Photos by Frances Dickson

Because of man's increasing technological ability, it is certainly within his power to eliminate a species without too much effort. It is a tribute to our field staff that their decisions prove right most of the time so that such a resource, as the herring, will return for years to come to serve man again and again. Winston Churchill probably said it best when he said "never have so many, owed so much, to so few. Thank you gentlemen, our job could never be done without you".

J. H. Boland

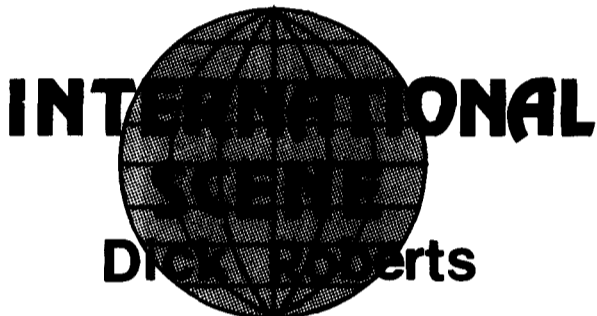


CONTINUE .....

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HERRING HAILED CATCHES AS OF APRIL 3, 1975

<u>Sub-District</u>	<u>Seine</u>	<u>Gillnet</u>	<u>Total All Gear</u>
Queen Charlotte Islands	6,982	125	7,107
Northern	1,300	1.5	1,301.5
Upper Central	404	2,325.5	2,729.5
Lower Central	3,842	4,148	7,990
Upper East Coast	1,168	576.5	1,744.5
Middle East Coast	202	-	202
(North of Georgia Strait)			
Lower West Coast	14,491	8,935	23,426
Upper West Coast	7,260	1,487	8,747
Total By Gear	35,649	17,598.5	53,247.5
Strait of Georgia	245	6,107	6,352
Grand Total	35,894	23,705.5	59,599.5
Percentage By Gear	60%	40%	



Your editor has asked me, and I have readily agreed, to make a regular contribution to the SOUNDER highlighting events of interest taking place in the international fisheries arena. This, then, is my first report.

Probably the most important set of international negotiations taking place right now are those in Geneva where the second substantive session of the Third United Nations Law of the Sea Conference started on March 16th and is due to end May 10th. In later issues I will be dealing with Canada's position at the Conference and the progress being made towards arriving at a new legal regime for the world's oceans. We are hopeful, of course, that the groundswell of support that developed at Caracas, Venezuela last fall for the 200 mile economic zone will be translated into a multi-lateral convention allowing coastal states to have management responsibility for resources off their coasts. This, of course, will mean profound changes in regional objectives, priorities and activities.

You might be interested to know who is representing Canada at these negotiations. The delegation is led by Ambassador Alan Beasley, currently Canada's Ambassador to Austria and a well-known and highly-respected Law of the Sea expert. Len Legault, Director-General, International Fisheries and Marine, heads up the Fisheries team and he is supported by Mike Shepard, formerly a scientist in Nanaimo and the International Fisheries Advisor in Vancouver and now Director, International Fisheries Policy in Ottawa. Also on the Fisheries

team is Dr. A. W. L. Needler, who you will remember as former Deputy Minister of Fisheries and who is now our chief negotiator in ICNAF. Advising the delegation are representatives of the processing and fishermen's segments of the industry. These include Ken Campbell (Fisheries Council of Canada), Bill Harrison (B. C. Packers), Homer Stevens (UFAWA), Joe Garcia (PTA), Jimmy Sewid (Native Brotherhood) and John Clifton (Native Brotherhood).

In future issues I will be dealing with the Law of the Sea in greater detail as well as with the Canada-US salmon talks and our negotiations with the Soviets and Japanese regarding halibut.

Notes: The Canada-USSR West Coast Fisheries Cooperative Agreement was extended for another year to February 19, 1976 and the Navigation Agreement was extended to April 15, 1976. The Canada-USA Reciprocal Fishing Privilege Agreement expires April 24, 1975 and efforts are now underway to have this agreement extended.

Dick Roberts

## Obituary

E. W. (Ed) Armstrong of Duncan, Fishery Officer in charge of area 18 for the past several years passed away on March 17 after a short illness. Ed, who has served in areas 3, 8 and other northern sub-districts, was a most respected and capable officer. His most recent duties in the Cowichan sub-district saw him face up to a most demanding Indian food fish situation with great courage.

Memorial services were held in Duncan on March 21 and were attended by district 3 personnel and ex-comrades.

Ted Epps

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# Editorial - Funereal ?

Maxine Haugen, the ex-editor of the Sounder, was a member of an Industrial Editors group. This membership resulted in her receiving member "Company newspapers" from all over the U. S. and Canada. Since Maxine has left, I have been receiving these papers. One thing which seems common to most of these newspapers is that they are essentially "vehicles of management". Company line is pushed. Selected staff social activities are covered to generate "esprit de corp". A few invite staff to write in about their gripes - on any subject. In actual fact any criticism printed is so minor as to suggest that the companies border on "Camelot".

The few times that Maxine entered the Sounder in Industrial Editor's competitions or workshop evaluations the other editors involved were always amazed (no overstatement) that the Sounder was largely written by operational staff. They were amazed at the lack of a "pushed" company line. They were amazed that the Sounder survived.

The point I am trying to make is that the Sounder is - or at least was somewhat unique - it was a staff newspaper written by the staff - not by a tame newspaper staff. Please note I used the past tense - in the last 6 months or so the Operations staff input to the Sounder has been negligible. Although everything from bribes to threats have been made to get staff input - ZERO! We have offered to ghost write articles - NIL! We have pleaded from art, written or photo materials from a Spurious Emission to a multi-page spread - ZILCH!

I, for one, feel it's time for the staff and/or management to make a decision on whether to

- continue Sounder as is
- continue Sounder as vehicle of management or
- discontinue the Sounder - ZONK!

Would the one or two of you who care and/or can write and/or can phone make your wishes known.

The "Sounder" told me today that Les Thacker was leaving Fisheries and asked me to write a note on this. An assignment like this is parallel to writing an obituary. Since Les Thacker is not dead it can't be an obituary - unless maybe Fisheries is dead.

Perhaps this is so, maybe Fisheries is dead when they allow (or cause) a guy like Thacker to take early retirement. Les has been with our team for 20 years and has played a strong part in all of our successes. When I came over from Nanaimo eighteen years ago Les was a first stringer with the Fish Culture team - every bit as important as superstars like Clay, Lucas, Edgeworth, Hourston, Gordon and others that are now all-stars in the major leagues.

Thacker handled all of our administration load - purchases, contracts, vehicles and what have you. Everything he did was for the good of the team, not once did he consider personal goals in his pursuit of team goals.

As Fisheries grew in size and complexity, Les left Fish Culture and began to work in the regional administrative section. The centralization of purchasing and personnel plus the growth of bureaucratic control added to his work load. The practice of continually adding to our project and technical staff without adding to our administrative staff threw another increment of work his way each year. Since Les doesn't know how to do a poor job and since Les is too proud to cry for help he gradually found himself working nights and weekends just to keep up. I suppose the time finally came when he realized that there must be more to life than just work so he decided to quit.

I would like to have seen him around the office for a few more years. Even if he could work at half-speed, I figure he'd be worth his full salary. But he's made up his mind and I'm sure that everyone who knows Les Thacker will wish him the best of luck in retirement. If he ever decides to look for another job, some outfit will get a damn good man.

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## Retirements

On December 28th, E. S. (Sym) Robertson retired as Fishery Officer after having been with the Service for almost 28 years. His most recent service was in area 17 but previously he served in areas 8, 16, 18 and at Chilliwack.

We wish him a pleasant retirement in the Fraser Valley where he intends to take up residence.

A dinner and social evening attended by District 3 personnel was held on April 3 at Nanaimo.

Tedd Epps

---

Dixon MacKinnon

For that rundown feeling -  
jaywalk!

Enjoy barbequed ribs -  
turn up your electric blanket!

Millions aren't working - but thank  
goodness they have jobs!

It isn't puppy love with that patrol  
boat cook - he has a real dog!

# SALMON ENHANCEMENT

R. MacLeod



*The following press release was issued at the Minister's press conference on March 24th at the announcement of the salmon enhancement program.*

The Government of Canada is embarking on a massive salmon development program in British Columbia, aimed at doubling to \$400 million the annual production value of Canada's Pacific salmon industry. Federal Minister of State for Fisheries, Roméo LeBlanc, in making the announcement here today, described the program as "an exciting example of man's ability to enhance, rather than endanger, an invaluable natural resource."

Objective of the development program is to double the stocks of Pacific salmon for the benefit of commercial and recreational fisheries and the Indian food fishery of British Columbia. By applying such proven enhancement techniques as artificial spawning channels, hatcheries and fishways, Environment Canada's Fisheries and Marine Service anticipates achieving this goal by about 1990.

The program, costs of which are tentatively estimated at \$250-300 million, should eventually pay for itself in terms of the increased returns to salmon fishermen, Mr. LeBlanc said.

Detailed planning of development projects and facilities which will be spread along the entire British Columbia coastline will comprise the first phase of the program commencing this spring. An accelerated level of construction of new facilities is planned to start in 1977 after final plans for the overall program have been given government approval. During the planning stage, regular construction activity on current salmon enhancement projects will be continued.

"The Government of British Columbia has expressed keen interest in cooperating in the implementation of this history-making program," Mr. LeBlanc said. "I have already held discussions with Hon. Jack Radford, Minister of Recreation and Conservation, and our officials have been working together very closely." Terms of the Province's involvement are to be incorporated in a federal-provincial agreement to be negotiated prior to the construction phase.

Salmon enhancement techniques perfected within the past 15 years in Canada and elsewhere will be applied in designing the facilities required.

"We could quite conceivably add 25 million salmon to the B. C. commercial catch, increasing annual wholesale value of industry production to \$400 million," the Minister said. "We could also triple the annual capacity of the sport salmon fishery to three million fishing days and have a thoroughly adequate Indian food fishery."

Mr. LeBlanc noted that Canada's valuable Pacific salmon resource has declined to one-half of its historic levels, largely as a consequence of the effects of industrial development and urban growth on the aquatic environment.

Since the mid-1950's, salmon population levels have been stabilized by the application of scientific management, increased protection and artificial enhancement techniques to increase production.

"This enhancement study is a logical progression in a long history of government involvement in the development and application of fish culture techniques," said the Minister.

Mr. LeBlanc paid tribute to former Environment and Fisheries Minister, Jack Davis. "It was the vision and energetic direction of Jack Davis which provided the inspiration for this bold and imaginative approach to the long-cherished dream of expanding our salmon resources," he said.

The Fisheries and Marine Service of Environment Canada and the International Pacific Salmon Fisheries Commission have undertaken some 49 salmon enhancement projects since 1945 with capital investments of \$26 million.

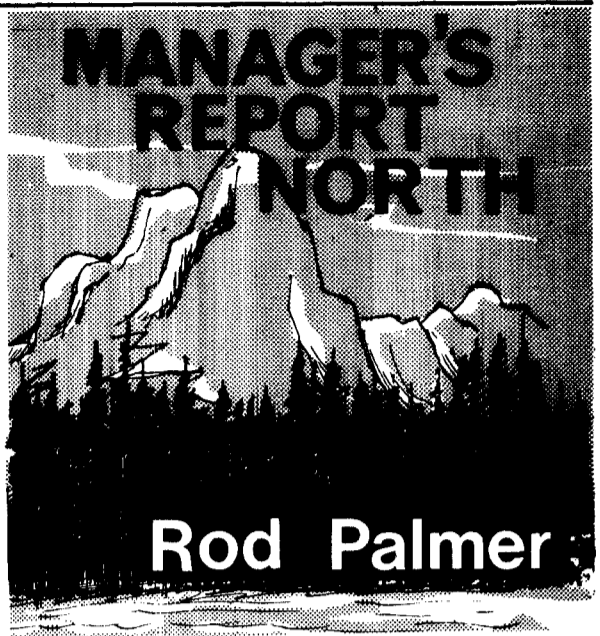
Close to 80 percent of the capital expenditures on Pacific salmon enhancement have been made in the last decade, the major portion (\$16.2 million) being devoted to three projects--spawning channels for Babine Lake sockeye, and chinook and coho hatcheries at the Capilano and Quinsam Rivers. Spawning channels constructed in the 1960's for sockeye, pink and chum salmon have also produced good results.

The Minister announced the program proposal on March 24th, and that is one more hurdle passed. We are still awaiting word on our budget proposal for the 1975 - 76 fiscal year but expect to hear by mid-April at the latest. I am cautiously optimistic that the word will be favourable.

The next two years will be a planning-preparation phase, with some construction activities. Cabinet has accepted, in principle, the proposal to double the size of our salmon resource, has approved the two-year planning-preparation phase and has authorized the Minister to enter negotiations with the Province to develop a federal-provincial agreement on salmonid enhancement. Cabinet expects to receive from our organization a detailed program proposal by March 1, 1977. This proposal will identify options for financing and cost recovery as well as spell out in more detail exactly how we intend to proceed.

During the next two years a number of biological and engineering studies will be carried out. These studies will look at the "big picture", in terms of coastal migration characteristics of salmon, steelhead and trout and also will focus in on specific sites and stocks. Economic studies will be directed to marketing, program and project evaluation, modes of financing and cost recovery, and more precise determination of the contribution of fisheries to regional economics. To all intents and purposes, the next two years will be an intensive mobilization period during which time we develop our detailed plans and marshall our resources.

More details when we get the (good) news on the budget.



## The Mereworth Ghost

Ay'm yoost an old handlogger,  
From Seymour -- up the coast,  
Ay'm tahl and thin -- kind a scrawny;  
The cah! me the Mereworth Ghost.

Ay've logged them sidehills over  
Vith saw and axe and yack;  
But the only thing Ay can show for it  
Is the wreck in this vorn out sack.

Oh! Ay've made my pile the odd time;  
Then Ay spent it fast and loose;  
Then along came the days of nahthing  
Ven Ay could eat the fur off a goose!

Ven Ay'd mahney, Ay'd take the big  
steamer  
And head for a spree up in town.  
Ay'd spend my green cabbage on taxis,  
And kick up my heels ahl aroun'.

The girls, they vos there ahl about me,  
Saying, "Axel, you gotta stay here,  
Get yanitor yob now or something  
To keep us ahl vinter in beer."

Vell! Ay tried it out for vun vinter;  
But my boss man he got really mad.  
Ay vos yoost making brew in the basement  
And he tole me the smell vos too bad!

He cahled me a crazy old sqvare head  
And tole me Ay better vamoose!  
Ay looked at him hard for a minute;  
Then Ay fired a vet vod of snoose!

A few qviet vords then followed  
As ve faught on that floor of seement;  
Then the cops came and picked up the  
vinner  
And the yudge gave me ten days free rent.

Ven they freed me, Ay vent back to  
Seymour  
To work on my old rocky claim.  
Ay starved for the rest of that vinter  
And that's vhy they gave me my name.

Ay still come to town around Christmas,  
To fight and to beer and to boast.  
Then Ay go back up there to Seymour  
Vhere they cah! me the Mereworth Ghost.

John E. Robinson

As I write this report, the herring fishery is well underway in the north, and I have the impression that the lessons learned in the past two years are bearing fruit. The fishery is under control and delegation of decision making to the people on the grounds has, in my opinion, been successfully achieved. The new equipment and sampling and patrol resources have certainly assisted in management of the fishery, but the biggest asset has been the development of ability and confidence of the field staff.

The salmon enhancement program has now been announced by the Minister following approval by the Cabinet, and the next step is to obtain funds for 1975-76.

During the next two years, studies to develop major enhancement proposals will be emphasized. Major work being proposed for the north includes: a chum salmon study on the Queen Charlotte Islands; a pink and chum salmon investigation on the central coast; and an investigation of Nass and Skeena River chinook and coho stocks. The objective of the studies will be to obtain information on the stocks necessary for enhancement and future management and to locate stream sites suitable for enhancement.

Several small construction projects are proposed for 1975-76, and three of these are planned for the north. A four million egg capacity incubation box installation will be constructed to begin the rehabilitation of the Atnarko River pink salmon. A 1.5 million egg incubation box facility is proposed for construction on a stream in Skidegate Inlet to test the incubation box technique for chum salmon enhancement on the Queen Charlotte Islands. An 0.5 million egg portable mini-hatchery for chinook salmon is proposed for the Kitimat River but will not be installed until late 1975. It will be ready for the 1976 run. The other two projects are planned for completion in time for the 1975 escapements.

I am hopeful that an N.O.B. staff meeting will be possible this spring. Tentative plans are being developed for a meeting to be held in May, but nothing specific has been set at this time. Any proposals for the meeting agenda would be appreciated.

# THE Sounder

## Letters to the Editor

Editor,  
The Sounder,

As the Jan/Feb issue of the Sounder has the indications of it becoming a Technical Bulletin, I hasten to write a few words, hoping that there will be more input.

Having worked in close proximity to the Editor for the last two issues, one cannot help but sympathize with her insofar as having to really work to find sufficient to print.

It is hoped that in her new position, it might be that she will have some time to 'delve' or 'nag' people for items BUT THEN WHY should she?

We have some interesting news items - the Big Qualicum River Project, Capilano River Hatchery, the Quinsam River Fish Hatchery. There should be something going on at these places most of the time. How about activity reports, in order that not only employees of the Department can visit and learn first hand, it can then also be recommended to friends as 'places to see', I am not familiar with the procedure for visitors at the 2nd and 3rd places mentioned but Dick Harvey and staff at Qualicum have always been most obliging.

We all don't get copies of the Georgia Strait Head Program bulletin, but they seem to even offer rewards or have a draw? I must presume not open to employees but your friends might be interested.

We have recipes galore - how about 'hot' fishing spots, or where to get the shellfish, for a family feed, etc.

There is a 'Spurious Emission' page, this seems to bring out staff news items, but again it seems to be a search for items, or depend upon the 'grape vine'. Perhaps everyone should consider him(her) self a cub-reporter, then perhaps the Editor would have ample material to edit and some left over for the next issue.

GIVE HER A LINE OR TWO.

Pat Phillips,

To: Editor "SOUNDER"

Re: Salary

You may find the attached of interest.

When I joined in June, 1954 as F/O my salary was around \$2,700.00 per annum - and I paid my moving expenses and travel expenses to Prince Rupert and furthermore was not put on

the payroll until after arriving at the Rupert office to be sworn in by Mr. Ed Moore!!

Cheers,

W. D. C. Webber

### CIVIL SERVICE CLASSIFICATIONS

Applying to Department of Fisheries  
Outside Administrative Service as  
Approved by Order in Council of April 17,  
1946 - P. C. 1-1610.

#### CHIEF SUPERVISOR OF FISHERIES

Compensation: \$3600 \$3720  
\$3840 \$3960  
\$4020

To apply to all present incumbents

\$4200 \$4380  
\$4500

To apply to all future appointments and to reclassifications which may be recommended in accordance with current regulations.

#### ASSISTANT CHIEF SUPERVISOR OF FISHERIES

Compensation:  
Annual: \$3300 \$3420 \$3540  
\$3660 \$3780 \$3900

#### REGIONAL SUPERVISOR OF FISHERIES

Compensation:  
Annual: \$3000 \$3120 \$3240  
\$3360 \$3480 \$3600

#### SENIOR FISHERIES INSPECTOR, GRADE 2

Compensation:  
Annual: \$2700 \$2820  
\$2940 \$3000

#### SENIOR FISHERIES INSPECTOR, GRADE 1

Compensation:  
Annual: \$2400 \$2520  
\$2640 \$2700

#### FISHERIES INSPECTOR, GRADE 2

Annual: \$1500 \$1620  
\$1740 \$1800

To apply to all present incumbents

\$1800 \$1920  
\$2040 \$2100

To apply to all future appointments and to reclassifications which may be recommended, in accordance with current regulations.

#### FISHERIES INSPECTOR, GRADE 1

Annual: \$1260 \$1380  
\$1500

To apply to all present incumbents

\$1500 \$1620  
\$1740 \$1800

To apply to all future appointments and to reclassifications which may be recommended in accordance with current regulations.

GREETINGS FROM KAMLOOPS:

Does anyone wonder what goes on in Kamloops in winter while the Adams River sockeye eggs lie deep in their gravel 'beds' slowly hatching so they can emerge in the spring and begin their precarious lives as salmon?

For recreation there's hockey, skiing, snowmobile riding, conventions - and bull sales. We have just finished one bull sale, complete with banquet and speeches, and one of the local merchants has a special on 'steer manure' at \$1.49 a bag. (Cleaning up no doubt). On top of that, both the Socreds and Conservatives held conventions - oh we had plenty of b--s--, er steer manure.

The air has been noticeably hotter too - so that the snow has melted off the city streets and some lawns. But how the heck did the robins know about the double convention?

The show bulls sure get it soft. While their brothers spend 24 hours a day in an open field, with hay thrown to them once a day, and the chill factor way down --, the show bull is kept warm, fed regularly, groomed and shampooed (and dried off with mother's hair dryer) in preparation for the day when the owner hopes to win a ribbon (and turn a fat profit).

But for all this primping and pretty-ing the bull doesn't get much action these days. What with A. I. he may be lucky if he even sees a heifer. They probably are as frustrated as the jack sockeye that come to Adams River a year early.

What have bulls got to do with salmon? Well, you better believe that many a coho has been sacrificed to the bulls in this country. Many a rancher has diverted water from a coho stream to grow alfalfa for his bulls.

Some coho streams have been lost in years long past, with only the old timers remembering them, and other streams are threatened as the ranchers want more water to raise more bulls. I've had ranchers argue that 'My bulls are worth more than your fish'. We try to persuade them that we can both exist, without having to cite the Fisheries Act, but it's tough.

Just one of the problems we have here in trying to protect and conserve our salmon runs.

And that's not steer manure.

Alf Hilland

ACHIEVEMENT, n. The death of endeavor and the birth of disgust.

BELLADONNA, n. In Italian a beautiful lady; in English a deadly poison. A striking example of the essential identity of the two tongues.

Spurious Emissions

Personnel

Kate Glover has left her job as secretary to the Manager, N.O.B. and is working as a research technician for Chris Newton, Special Economic Programs and for N.O.B. and will continue to serve as editor for the SOUNDER.

\* \* \* \* \*

Don Buxton has transferred from North Coastal Division to Johnstone Strait/Fraser River Division.

\* \* \* \* \*

Pam McNally is the new secretary to the Director-General.

\* \* \* \* \*

Helen McLean retires on April 21st from Personnel Branch after 17 years with the government, 12 of them with Fisheries. Our best wishes for a happy retirement.

\* \* \* \* \*

NOB HOSTS NAUTICAL CANDIDATES

Ron Crist, Engineer in the Pillar Rock, recently attained a 4th Class Certificate of Competency after attending Vancouver Vocational School early this year. Ron had applied for, and was granted, educational leave for the purpose.

Rumour has it that he will try for the 3rd Class next year.

Ron has served as engineer in the old Egret Plume before the Pillar Rock was assigned the Masset station.

\* \* \* \* \*

Phil Lloyd, also granted educational leave, is at this writing working toward a 350 ton Master Home Trade certificate, having only his "orals" to take.

Phil has been mate most recently in the Kitimat, and has served in the Sooke Post and original Kitimat throughout most of the north coast.

\* \* \* \* \*

R. C. Bryan, internationally acclaimed author better known as Dick, has departed from Fisheries to lead the Employers Council of B. C. in their research endeavors. Dick's best known publication to date, What Do People Look for in a Fishing Trip Besides Fish? is soon to be followed by an exposé of the Capilano River Fishermen. Aside from his obvious talents as a writer, Dick is famous for his lecherous grin and his expertise in gastronomic delights.

\* \* \* \* \*

CONTINUE.....

I found this poem in a publication by the Island (Q.C.I.) Protection Committee which says a lot about the relationship between the "alternate culture" of the Islands and the Masset straight folk (mainly military). Also, it is rather humorous.

In the North Beach sands  
Lives the razor clam  
A retiring little critter that don't  
give a dam  
He faces the world with his posterior  
While surging tide cools his interior.  
He's like a ship without a rudder  
Where his head should be he wears an  
udder  
This brings to me a thoughtful frown  
He's like some of the folks in Masset  
town.

"Hibby" (Hilbert Gren) Tlell

\* \* \* \* \*

Quinsam hatchery complex is slated for its official opening in late May. It is planned to have the Minister of Fisheries out to do the opening duties. Much to-do and trumpet music planned.

\* \* \* \* \*

An interest quote?  
"Each \$1,000,000 of Government waste represents 1,000 manyears of income tax effort."

\* \* \* \* \*

Overheard. "Love makes the world go 'round but so does that wine Zyblut brings to the On On."

\* \* \* \* \*

Western Fish & Wildlife has just published a special edition: 1975 B. C. Fishing Guide containing excellent articles on salmon and other gamefish: life history, habitat, feeding habits and how to catch them. The magazine also lists, by area, good fishing spots.

\* \* \* \* \*

Is it spring? In 1090 W. Pender there has been a real hum (sound not odor) in the air. Ever since the new floor plans were posted there have been groups of people studying the plans; discussing the pros - cons; seeing who came out "better or worse"; looking at traffic flows and probable noise levels. "Thank goodness that bastard is on another floor, he always has a party going in his office".

There was no comparable interest or discussion when we got our \$500 salary boost a while ago. Just comments like rip-off; buy-off and some other "offs". I guess it shows that (don't stand too near anybody's corner post) territoriality is damned important to man the animal. To those who poo poo the status of office or location (or furniture) I say you're just kidding yourself - I saw you sneak a look at those plans too, and smile at all the status floor space you occupy.

In head office it is not width of the board walk or number of holes in the "utility" - but status is still vital.

## FISheries College St. John's (Or the Joy of Winter Travel)

The odds appeared heavily stacked against getting to St. John's, Newfoundland; a late winter blizzard closed the airport for three days but Air Canada made it to Gander then came a two hundred mile, twelve and a half hour taxi ride to St. John's that included getting stuck in three snow drifts along the way. So much for an introduction to friendly Newfoundland and their more leisurely way of life.

Saint Patrick's Day is a holiday on the island so part of the day was spent visiting the deserted rooms of the Fisheries College guided by Dr. Barret, the President. The College, which is part of the Memorial University, provides training for fishermen from net and boat construction through to processing the catch on shore. Training for all merchant marine tickets is also provided by a flexible staff who put courses on to suit almost any customer when ashore. The College has earned a reputation that now attracts students and visitors from many parts of the world.

An important part of the visit was to compare notes on echo sounder and sonar training methods. As a result of this exchange, the students at St. John's will be using the same visual aids prepared for the Prince Rupert courses. Their training ship, a 120 foot Long Liner. M. V. "BEINIR", is equipped with a Furuno FM22 (a very popular sounder on inshore boats), a Simrod EQ38 and MA echo magnifier (representing the most modern sounder for bottom fishing in deep water) and a Simrod SR2 sonar. (The sonar seemed a strange choice as a training unit as it does not have a tilt control, otherwise it is similar to the SK3 on the "TANU"). Artificial targets are used with both the sounder and sonar. Small icebergs were also available as sonar targets the day I went to sea to watch a class in action.

There are many courses of interest to Fisheries Staff and the College. I hope George Barber can get the support to send selected staff to the College for these courses and then give them here.

Peter Ryan

INTERPRETER, n. One who enables two persons of different languages to understand each other by repeating to each what it would have been to the interpreter's advantage for the other to have said.

# Noise & Fish - A New Wrinkle

Fishermen have felt for many years that some salmon and albacore troll vessels fish well--and that others do not. They have generally attributed this to one of two factors: some vessels create certain noises that either repel or attract fish; or they may emit or set up certain electrical impulses or fields that have the same effect.

At the request of several albacore fishermen, the Oregon State University recently conducted a preliminary test to monitor the noises emitted by albacore boats. The five boats involved did not provide conclusive results, and further tests are planned. One interesting and unexpected phenomenon did result, however, which may be worth passing along at this time.

The monitoring equipment was set up in an isolated part of Yaquina Bay, where outside noise would be minimal. A hydrophone was placed on the bottom of the bay in 25 to 30 feet of water. At about 15-minute intervals, one of the boats in the test would pass directly over the hydrophone, which picked up the sounds emitted by that vessel and transmitted them to a monitoring device set up on a nearby dock. This device simultaneously played them back through a speaker, also located on the dock.

The OSU researchers operating the monitoring equipment were equipped with a citizens band radio through which they communicated with (and provided directions to) the captains of the five vessels. All vessels were standing by on the same channel.

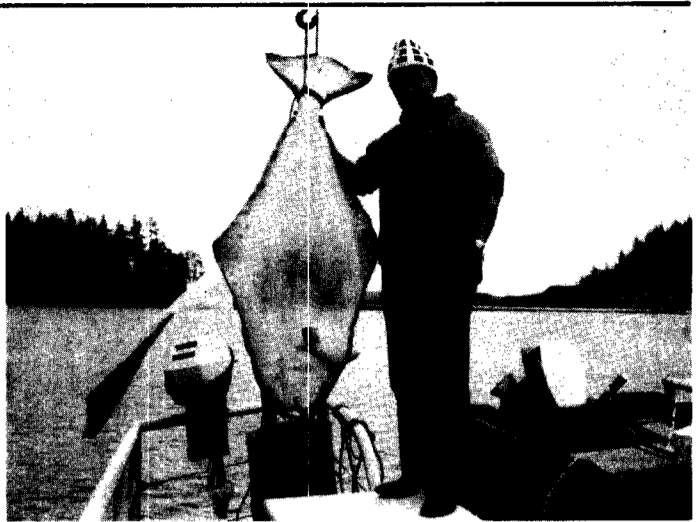
As the fourth vessel (steel with aluminum house) approached the hydrophone, the researcher providing instructions over the radio was talking with the next vessel to be tested, which was waiting approximately one-half mile away.

*The unexpected result?* The conversation between the researcher and the vessel half a mile away was being monitored by the fourth vessel, which was approaching the hydrophone. That conversation was transmitted through the wheelhouse and hull of the fourth boat, was picked up by the hydrophone 25 to 30 feet under the boat, and was clearly played back through the speaker on the dock.

Based on this one experience, not only the noises the boat creates, but also the "noises" the operator creates - by talking on the radio or just having his radio on -- may be important to how a boat fishes. How many times have you heard of someone "talking up a fish"? After a long dry spell with no fish, someone calls on the radio and -- bingo -- fish on!

There could be something to it.

from "Oregon Commercial Fisheries",  
Vol. 6 #2



Sport Fishing in Q.C.I. (in season)  
Photo by Frances Dickson

## Getting Involved

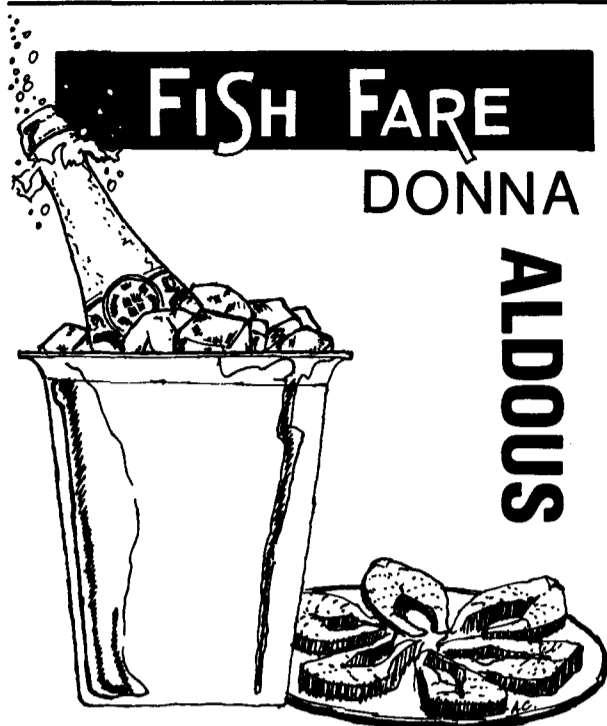
This fall members of the Victoria Branch of the Pacific Trollers Assoc. were actively involved with building and stocking incubation boxes. They are approximately 8 feet by 2 1/2 feet by 4 feet, scaled down from the million egg box the Fisheries are using on chum salmon. The scaled down box will hold 50,000 coho eggs, which can be gathered from approximately 40 adult salmon. The egg to fry survival rate is in the neighbourhood of 70%, compared to 20% in natural conditions mainly because of protection from freshet and related problems.

The principal of the box is quite simple. With a guaranteed water supply of 10 gallons per minute, they can be placed anywhere as long as the head of water is maintained. The fertilized eggs are placed in the boxes in alternative layers of eggs and gravel until the box is full and there they remain with the water welling up through the eggs and gravel until spring, when incubation takes place. At this time the fry can be collected and placed in good natural rearing areas in the upper rivers and streams.

This operation is only an experiment on coho, nevertheless it has been very successful in the case of chum salmon. If there is a failure or part failure, no matter, we will try again next time, trying to remedy the fault. The thing here to remember is that we have commercial fishermen and sportsmen working with the Federal Fisheries striving for one goal, more fish.

At this time I would like to acknowledge the help and great enthusiasm by all concerned, the building of the box by teacher and students of Sooke High School, the paint supplied by Trotac Marine and International Paints, and especially all those bodies who helped, thanks a million boys for a job well done. If this is a success we will be looking for other bodies and other streams in other areas, so keep your eyes open fellows, your stream could be next.

Pacific Trollers Newsletter,  
February, 1975



Are you hurting - really hurting - financially these days? The taxman has cometh and gone, probably with your summer-holiday savings. Cheer up. You don't have to substitute Wreck Beach for the Riviera this year. Start saving now; today's recipes are going to help you on your way! So think of me when you wiggle your toes deep in the warm sand ... after all, who helped to get you there?

During February I attended a promotion for mackerel, sponsored by Environment Canada and the Atlantic Provinces, for the Atlantic Mackerel Development Program. The motif of the promotion (decided upon before the slogan for International Women's Year appeared) was "Why Not Mackerel?" There is a tendency here to laugh, but after our recipes were sampled by discriminating fish lovers, such as representatives of fishing industries, chain store buyers and food editors, the surprised consensus was, indeed, "Why Not Mackerel?" It was delicious!

Mackerel is a cousin of the tuna, and although it is readily available from large stocks, is an under-utilized species in Canada. This is unfortunate because it is just as nutritious as tuna or salmon and has more iron, Vitamin A, thiamine and riboflavin than those species, with a slightly higher fat content. The fat content of fish, however, is low in saturated fats, so is not harmful. The protein of mackerel and all seafood is more easily digested than animal proteins, but is just as valuable as beef or chicken protein.

Mackerel is available in round form; filleted; canned; as smoked fillets; and in frozen fish cakes. The colour is slightly dark, which is one reason for its rejection by Canadian consumers. Once mackerel is blended in recipes with other ingredients, this disadvantage is not readily noticed.

When using canned mackerel, remove the bones, as these are not softened during canning, and any very dark skin should also be removed, for the sake of appearance only.

About the money-saving (I thought I'd keep you guessing); canned mackerel costs between one-third and one-half of the cost of canned salmon or tuna! If you use it often, you can save a great deal in your food budget.

To introduce an unfamiliar food, try serving it first in a favourite recipe, such as a pizza or casserole. The mackerel pizza can be cut into small portions and serve as an hors d'oeuvre, as was done at the Queen Elizabeth Hotel in Montreal.

#### SEAMAN PIZZA

1 can (7 ounces) smoked mackerel fillets  
1 package pizza pie mix  
1 1/2 cups grated mozzarella cheese  
1/4 teaspoon oregano  
1 can (14 ounces) tomato sauce  
Mushroom slices  
Green pepper, cut in strips  
Onion rings

Drain fillets and save oil; cut in pieces. Prepare the pizza pie mix. Turn out onto a lightly-floured board and knead for about 30 seconds. Roll into a 13-inch circle. Lightly brush dough with oil from mackerel. Arrange pieces of fillets on dough and sprinkle with 1 cup of sauce and pour over preparation. Sprinkle with remaining cheese. Arrange remaining fillets. Garnish with mushrooms, green pepper and onion rings. Bake at 400°F. for 15 to 20 minutes. Makes 4 - 6 servings.

Note: For appetizers - use 1 1/2 package pizza pie mix. Shape into small individual pizzas, 3 inches in diameter, turning up the edges slightly. Makes 12 small pizzas.

Try mackerel cakes in this quick and easy dinner.

#### FISH FINGERS SPECIAL

1/2 of a 1-kilo package pre-cooked fish cakes or fingers  
1 (10 fluid ounce) can condensed cream of mushroom soup, undiluted  
1 (4 1/2 fluid ounce) can sliced mushrooms (optional)  
1 tablespoon lemon juice  
1 small onion, chopped  
3/4 cup grated cheddar cheese

Arrange fish fingers in a shallow, greased baking or au gratin dish. Mix together the remaining ingredients and spoon over fish fingers. Sprinkle cheese evenly over surface. Bake in 425°F. oven until fish fingers are cooked, about 25 minutes. (Makes 4 to 6 servings).

Here is a snack or lunch idea, amazingly simple, and using fish fingers of mackerel; or you could substitute any fish cake available with good results.

#### SEASNACK

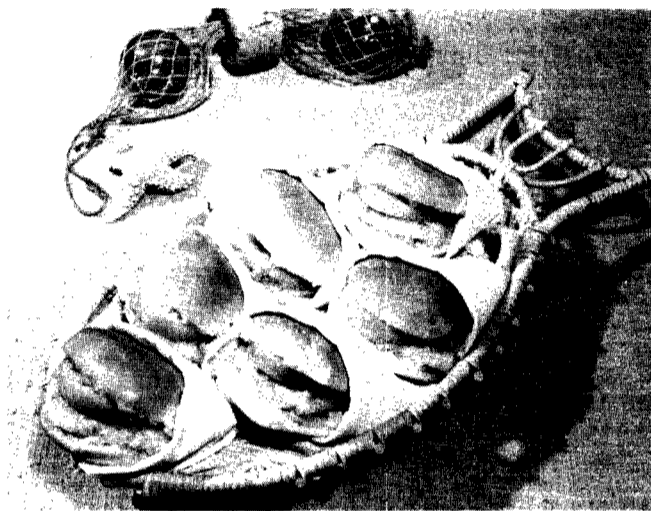
1/4 of a 1-kilo package of pre-cooked fish fingers or fish cakes  
5 hamburger buns, heated  
5 slices raw tomato  
5 slices bacon, cooked  
tartar sauce

Cook fish fingers according to package directions (12 to 15 minutes in a 400°F. oven). Place two fish fingers on half of each hamburger bun. Top with a tomato slice, a strip of bacon and a dab of tartar sauce, serve.

All the recipes prepared for the mackerel promotion buffet are available in leaflet form. For your copy, and some exciting taste temptations, write to me:

Consumer Consultant,  
Fisheries and Marine Services,  
326 Howe Street, Room 401,  
Vancouver, B. C.

and ask "Why Not Mackerel?"



National Film Board Photo

## .....and More Poems

Dave Harding

At Smithers we find big Al Groat  
Where he no longer needs a patrol boat  
He goes near and far  
In a fisheries car  
In an outboard or a Beaver on floats.

Our Sharon we know is busy  
With statistics and with E. D. P.  
She seldom is here  
When the weather is clear  
She's computing at the U of B. C. (?)

Our purchasing officer, Les  
Is very busy you have to confess  
But if near him you get  
With a lit cigarette  
Your morals he'll try to redress.

Olive Boyd is up in Accounts  
Do it right or on you she'll pounce  
Enclose with the bill  
A receipt from the till  
And be sure to check the amounts.

When on the grounds I see a sockeye  
I'm often left wondering why  
Over rapids and falls  
He\* fights and he crawls  
To love and to spawn and to die.

(\*Note: Non-sexist, general pronoun)

A fisherman's friend is Jack Ellis  
A new salmon licence he'll sell us  
On the 8th at West Pender  
There are girls sweet and tender  
That are there to look after us  
fellas.

An electronics technician named Alf,  
With components right off his shelf,  
A fish-counter built,  
Which makes Schutz wilt,  
And Ken Pitre talk to himself. \*

(\* What else is new?)

If spots on its back it does show  
A few facts you've just got to know  
High caeca, black mouth  
With tail spots down south  
Say chinook and not a big coho.

Ron was a canny old Scot  
Who could talk round a subject a lot  
He could talk on for days  
Till you left in a haze  
And not realize what you'd bought.

A skinny old buggar named Mallory  
Guards the coffee fund with valour, he  
Is in partnership there  
With a cutter of hair  
To help supplement his salary.

We have the Fisheries Act,  
For prosecutions after the fact;  
We need LeBlanc and Sauvé  
To now lead the way,  
And preventive legislation enact.

Ken Lucas of Fish and Marine  
On structuring is unusually keen  
To organizational "trees"  
He's added D. G.'s  
And introduced us all to Glen Geen.

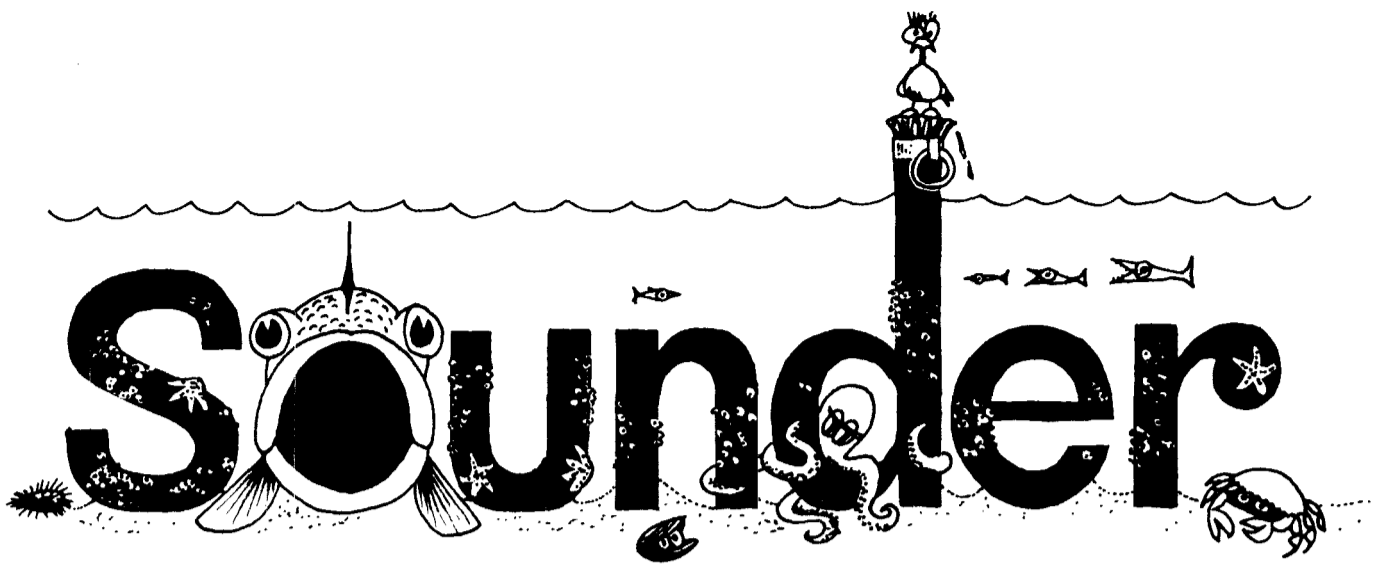
Brian Davies hollars and squeals,  
Over the east coast slaughter of seals.  
Did he ever examine  
How many salmon  
Would be slaughtered by a seal for his  
meals?

### THE Sounder

Kate Glover, Editor  
A. Chan, Layout  
1090 W. Pender St.,  
Vancouver I, B. C.

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## CANADA'S POSITION ON WHALING

Canada is not engaged in commercial whaling for any of the "great whale" species of the world's oceans. Small-scale whaling operations that had been in operation were ended on the Atlantic coast in 1974, and on the Pacific coast five years earlier. Canadians have never engaged in whaling in the Antarctic, where a few countries still carry on this industry. Canadian natives in the Arctic are still permitted to take limited numbers of small whales, belugas and narwhals, which are strictly for their own use.

Although not involved in commercial whaling, Canada actively participates as a member of the 15-nation International Whaling Commission which regulates international whaling. In all the deliberations of this Commission, Canada consistently supports the protection from exploitation of all stocks and species of whales believed to be endangered.

Four species of great whales -- blue, humpback, gray and right whales -- have for some years been fully protected by a moratorium (i.e. a total ban on whaling) instituted by the International Whaling Commission. These species were seriously depleted because of excessive exploitation in earlier years, but some are now showing signs of recovery.

Scientific experts on whaling, both inside and outside the Commission, consider that all the great whale species which are truly endangered are covered by the existing world moratorium. Hunting of other species is regulated by various conservation measures, such as minimum sizes, closed areas, closed seasons, controlled whaling methods and quota restrictions.

Whaling continues to be an important industry to certain countries, such as Japan, the USSR and a number of other nations, which are whaling for protein and also for economic benefits.

Concern for the conservation of whales throughout the world was expressed in 1972 at the United Nations Conference on the Human Environment at Stockholm, Sweden. A resolution adopted by that conference called for "an international agreement under the auspices of the International Whaling Commission and involving all governments concerned, for a ten-year moratorium on commercial whaling", also for strengthening of the Commission and for increased international research efforts.

The International Whaling Commission, although not accepting the moratorium proposal, has taken steps to adopt stricter controls on hunting, to increase research activity, and to base conservation practice on sound scientific advice. At its annual meeting in June, 1974, the Commission agreed to adopt a procedure that will automatically suspend the hunting of any whale stock considered to be depleted or identified as below an "optimum" level. This optimum might be described as a healthy reproducing stock, successfully maintaining its place in a well-managed marine environment.

Guidelines are being established at the present time by the Commission for the management of whales in three categories: (1) initial management stocks, i.e. those beginning to be exploited and above optimum population levels; (2) sustained management stocks, i.e. those which are being exploited near optimum population levels; and (3) protection stocks, i.e. those which are below optimum population levels and for which no hunting is permitted. Each major stock of great whales is being assigned to one of these categories, and is to be so managed.

Canada has supported the proposal for a world moratorium on commercial whaling since 1972 as a means of protecting endangered whales. The IWC guidelines adopted in 1974 provide for a system of selective moratoria which is

consistent with our primary objective of calling a halt to the hunting of endangered whale stocks.

The International Whaling Commission this year will determine and recommend the whale stocks which should be placed under moratoria. In the meantime, quotas set in 1974 have established allowable catches for all Antarctic and North Pacific stocks of great whales at safe levels. In the case of over-exploited fin whale stocks, very low quotas have been set to expedite recovery to optimum levels.

## COMMENT

Canada's position on whaling is in support of the basic principles of conservation. Conservation means wise use, and wise use means allowing utilization for man's benefit, assuring perpetuation of the resource for future generations, and retaining the ecological balance with other species.

Following the demonstration at Jericho Park in Vancouver for the Greenpeace Save the Whale expedition send-off, we should be concerned that our message is not getting across. One attraction drawing a large enthusiastic crowd was a skit making mockery of Canada's conservation policy regarding whales. "Oh, Protectors of Our Resource."

We should be concerned that the public is unaware of these principles. We should be concerned that a small group of people is able to sway the populace by appealing to their emotions.

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## HEAD RECOVERY

Beginning April 1, 1975 a completely new reward system takes effect. Nosetagged chinook and coho caught in Georgia Strait on or after April 1 will be processed under the '75 - '76 system.

\$3 Reward Ended - Draw Prize Increased to \$500

The Fisheries Service will no longer offer a standard three dollar (\$3.00) reward for all nosetagged salmon caught in Georgia Strait. Instead, the fisherman's name is entered in a draw for a \$500.00 prize and six prizes of \$50.00 each. The '75 - '76 fiscal year will still be divided into eight periods but with 7 prizes awarded per period. Thus, Fisheries will distribute a total of 8 prizes of \$500.00 each plus 48 prizes of \$50.00 each. All prize winners must answer a skill testing question in order to qualify for a prize.

No Other Change

The eight periods remain as follows: April - May, June, July, August, September, October - November, December - January, February - March.

Fisheries will continue to return information to all fishermen who turn in heads.

The reward program still applies only to nosetagged chinook and coho caught in Georgia Strait (defined in this case as waters south of Hardwicke Island in Johnstone Strait and east of Sheringham Point in Juan de Fuca Strait).

Fisheries Service still asks both sport and commercial fishermen in Georgia Strait to check all chinook and coho for a MISSING ADIPOSE FIN. If the adipose is absent please turn in the head at a sport or commercial head depot. Commercial depots will still buy the fish head-on.

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## GROUND FISH

On April 23rd, 1975, Romeo LéBlanc, the Minister of State for Fisheries, announced a 50 million dollar "bridging" program to strengthen and rehabilitate the Canadian groundfishery. The main intent is to keep groundfish fishermen and vessels fishing, and to prevent the secondary groundfish industry from collapsing, until such a time when long term measures are developed and implemented. Since only about 5% of Canada's total groundfish industry is in B. C., the program is geared mainly towards the Atlantic coast, and the Pacific region will benefit little from it.

The new program, which went into effect on May 1, follows a series of assistance programs providing short term deficiency payments and conditional cash grants to processors of groundfish. The aim of these subsidies was to keep groundfish products off the market in an effort to maintain prices, with the ultimate goal of creating a viable industry.

The "bridging" program which will be reviewed quarterly, provides support of up to 28 million dollars at 2 1/2 cents per pound paid directly to fishermen delivering first quality fish. This is to be limited to 1974 levels of groundfish by species. The program also provides up to 12 million dollars in grants to processing plants, at eight cents per pound for frozen products and fresh fillets, on the condition that July 1, 1974 prices to fishermen are maintained. An additional 10 million dollars have been allocated to help solve marketing problems through deficiency payments, inventory financing, and by processing fish for international food aid programs.

It can be appreciated that this program is necessary in the east coast fishery, which is truly a tragic state. Twenty-five years of federal subsidies have encouraged inefficiency by propping up small processors. In the natural course of events, many of these would have been bought up and consolidated by the more successful participants, able to operate without subsidy. A rationalization of the processors would have resulted in a cheaper product, and a more efficient industry.

In 1968, the east coast industry experienced a collapse, for which subsidies were largely to blame. As an indication of the extent to which the industry is subsidized, it has been possible to obtain a vessel on the east coast with only 10% down, the rest financed by governments. The result is too many vessels, with no commensurate increase in fish stocks. It is the opinion of the writer, that nothing is really free.

The west coast groundfishing industry is not nearly in the same depressed state. However, the imposition of this new national "bridging" subsidy has necessitated a quick reaction on the part of the west, in order that subsidy will not hurt rather than help. The west coast will attempt to tailor its 'share' of the subsidy to best suit its needs.

This will be done by limiting the subsidy to those fishing groundfish by trawl. The reason for this being that there are too many (about 2200) vessels which take groundfish incidentally to other catches. Troll vessels take groundfish and deliver it dressed, for which they receive premium prices. It is feared that the incentive 2 1/2 cents per pound would result in the closure of some areas for ling cod, grey cod, and flatfish. This would be a severe hardship on those relying on groundfish for their whole income, particularly marginal handliners in the Gulf of Georgia.

Since trawl fishermen presently receive the lowest prices for groundfish, it is felt that they need the assistance most. Further, it is expected that this year will be another poor salmon year, and it is anticipated that many salmon vessels will increase their efforts towards groundfish. Trawl fishermen have consistently asked for protection from this sort of thing.

Currently, there are 93 trawl vessels responsible for 90% of all groundfish landings in B. C. There is hold capacity in the fleet for 125 million pounds, or roughly twice the Canadian share of allowable catch, based on 22 trips per boat per year. The addition of more vessels to this fleet would result in less catch per vessel. These reasons gave cause to a limited entry program for trawlers; the west's reaction to the national subsidy.

The west would also have preferred to weigh the subsidy in favour of under-exploited fisheries, rather than adhere to 1974 levels for all species. It would be desirable for instance, to develop mid-water trawl techniques to fish known red and rock cod stocks at a depth of about 90 fathoms. However, it is still undecided if this will be permitted.

The west coast groundfishery in the future should look towards "fishing out" the Americans. At present the total catch on our coast is shared 50:50 with the U. S. It is hoped that

with a limited trawl fleet, incomes to vessels will increase and technological improvements be stimulated, as was the case in the salmon fleet. A more efficient fleet could out compete the Americans for our fish.

Elsemarie Wilson,  
Special Economic  
Programs.



At the time of writing, the Geneva LOS Session had just ended, with preparations being made for another session sometime next year. Some significant progress has been achieved this time around, but the 150 or so states represented have yet to start drafting a final convention. On fisheries issues, an informal, but highly prestigious group of countries were able to get together to formulate a series of draft articles on the economic zone "for discussion purposes". Canada was a member of this group, known as the "Evensen Group", after its chairman, a Norwegian Cabinet Minister. The articles relating to fisheries and generally favourable to Canada's interests, and the problem now lies in having this package considered favourably by the whole Conference.

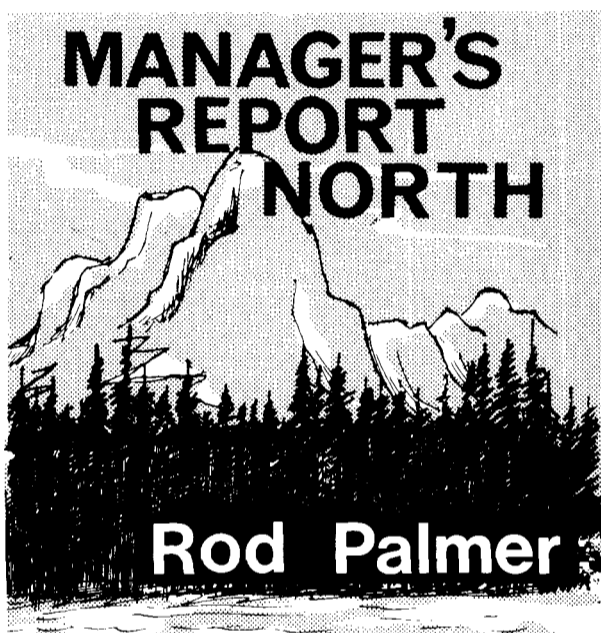
However, while some progress was achieved it is pertinent to note the comments by the Hon. Romeo LéBlanc, Minister of State (Fisheries) while he was in Geneva:

While confirming that Canada is deeply committed to a multilateral and equitable agreement he added, "But our ability to wait is limited by harsh realities . . . We must ask ourselves seriously whether or not time is running out."

He said, "Under existing conditions, I do not think it unreasonable for beleaguered coastal states, such as Canada, to explore possibilities of protecting their justifiable interests."

The Minister said that above all there has to be agreement on reducing distant-water fishing off other coastal states. He said Canada is willing to give other states access to a 200-mile economic zone off Canadian shores and "take surpluses beyond Canada's capacity to harvest."

Notes: the next round of the Canada-USA Salmon Negotiations have been put forward again until next September-October. The talks were originally scheduled for March, but were postponed because of the difficulty (!) in achieving a consensus amongst Canadian advisors. Cliff Levelton our chief negotiator, and other staff members, have recently concluded a series of separate meetings with each organization represented on the advisory group. Another series of consultations is planned later this spring to finalize the Canadian position. --- the Canada-USA Reciprocal Fishing Privileges Agreement was extended to April 24, 1976, with the understanding that either side can re-open discussions at any time should this be warranted by circumstances - e.g. LOS developments.



In my last report I described three salmon enhancement facilities which were proposed for construction in the north in 1975-76. These proposals, which included incubation boxes on the Atnarko River and Tarundl Creek and a mini-hatchery on the Kitimat River, were based on an anticipated Regional construction budget of two million dollars. The actual budget is only \$600,000 and we are now forced to lower our sights. The Atnarko River incubation box project will go ahead and some streams will be selected for minor improvement projects. The Tarundl Creek and Kitimat River projects must be put on the shelf for the future.

At the time of writing of this report the extent of the planning studies for the salmon enhancement program is still in doubt. The proposal for four million dollars for 1975-76 is still at Treasury Board and it is not known whether the full proposal or any part of it will be approved.

The herring season ended with a good balance between catch and escapement in northern waters. We have reviewed the fishery with industry groups and I believe they were generally happy with the management of the fishery. The only significant beef was that up to the minute information was not always available in Prince Rupert or Vancouver and field contact was often difficult. The reduced information flow was obviously a

result of the delegation of opening and closure decision making to the staff on the fishing grounds. This delegation contributed to the effective management of the fishery and will be continued in 1976 but communications can be improved and a number of steps will be taken before next season. The post-season review meeting held in Vancouver on May 7-8 resulted in a number of recommendations to improve management of the herring fishery in 1976.

In my last report I mentioned a possible Branch meeting to be held this spring. Since that time I have discussed with Dick Crouter the possibility of a combined Northern and Southern Operations Branch meeting and, although we both agree that a joint meeting is desirable, we do not know if funds will be available. We will attempt to organize a meeting after the salmon season if we still have enough money in the kitty.

## PROFILE



Photo: Kamloops Daily Sentinel

Federal fisheries officer, Les Goodman of Kamloops, is responsible for a natural resource that lives thousands of miles out in the Pacific Ocean, but returns to spawn and reproduce in the heart of B. C.

He supervises salmon spawning grounds in the Fraser River system that covers an area of 84,000 square miles in size. Spawning grounds in B. C. contribute in excess of \$50 million to the fisheries resource of the province.

This doesn't include the tremendous sport fishery in coastal waters that attracts about 180,000 avid anglers a year.

"B. C.'s salmon resource is increasing in dollar value every year and the number of fish are holding their own, but we are never positive about salmon because of Mother Nature", he said.

Primarily salmon spawn in river valleys. This is where they come in direct conflict with man. Urbanization and industrial growth is largely centered on the rivers of B. C.

To protect the resource, fisheries officers are assigned the responsibility for the well being, preservation and conservation of salmon.

The job also involves areas of activity that are aligned with provincial agencies responsible for pollution, water rights, and fish and wildlife.

Working to protect salmon in the face of industrialization is a far cry from his first job on Vancouver Island.

#### LOGGER FIRST

After finishing school and one year of university, Les became a logger in the days before hard hats and when power saws were just being introduced.

It was the type of logging where if you walked on the job you were told to "keep walking". In 1942, he joined the RCAF as a wireless operator and air gunner.

He served 2 1/2 years in Britain, Northwest Europe and in the Middle East. By the end of the war he had earned a field commission as a flying officer.

In 1946, back in Vancouver, he was accepted as a candidate for fisheries officer. He took his training in Vancouver and became a federal fisheries officer in 1947.

He worked out of Vancouver making periodic trips to coastal areas and then was put in charge of Lower Fraser gill net and commercial fishery.

After that the next 12 years was spent in charge of the Vancouver city fisheries district. He worked in conjunction with the fishing industry and describes the job as sort of a "jack of all trades".

In 1964, he was promoted to Kamloops as supervisor of District 1 in the Pacific Region of Federal Fisheries Service.

#### DIRECTS SIX

There are six fisheries officers working under his direction - three in Kamloops and one each in Prince George, Quesnel and Lilloet.

In addition about 12 seasonal patrolmen are hired to act as guardians when salmon are migrating and spawning.

Because salmon migrate far distances and often end up spawning in remote areas, the helicopter and airplane are being used more and more for enumerating and checking on the fish.

"Helicopters and aircraft are like ham and eggs to the fisheries department because most often time is of the essence when salmon are moving", he said.

#### 30,000 MILES

In addition, Les logs about 30,000 miles a year to check on his charges.

He is a member of the Kamloops and District Fish and Game Association and the Kamloops Naturalists Club.

"I always argue we should leave something behind us, and not use it all up just because it is there."

Although he gets all the nature anyone could get through his full-time job, Les still enjoys gardening and fishing, with an occasional hunting trip.

But he doesn't rush out every weekend to the outdoors.

"I get all the camping and hiking I can use on the job."

There are also more and more demands on him in his work. He has to run faster and faster to keep up the pace of industrial growth, he said.

(Reprinted from the Kamloops Daily Sentinel)

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A toy manufacturer has invented an educational toy to adjust a child to live in today's world. No matter how he puts it together, it's wrong.

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## JOB DESCRIPTIONS: STRAIT JACKETS

Great for key-punch operators and other jobs where the turnover is high and the work is largely repetitive.

Insane for jobs that pay \$150 a week or more. Judgment jobs are constantly changing in nature and the good people should be allowed to use their jobs and see how good they are.

At best, a job description freezes the job as the writer understood it at a particular instant in the past. At worst, they're prepared by personnel people who can't write and don't understand the jobs. Then they're not only expensive to prepare and regularly revise, but they're important morale-sappers.

- Robert Townsend, Up the Organization

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As every whale knows, when you get to the top and blow off steam, people throw harpoons at you.

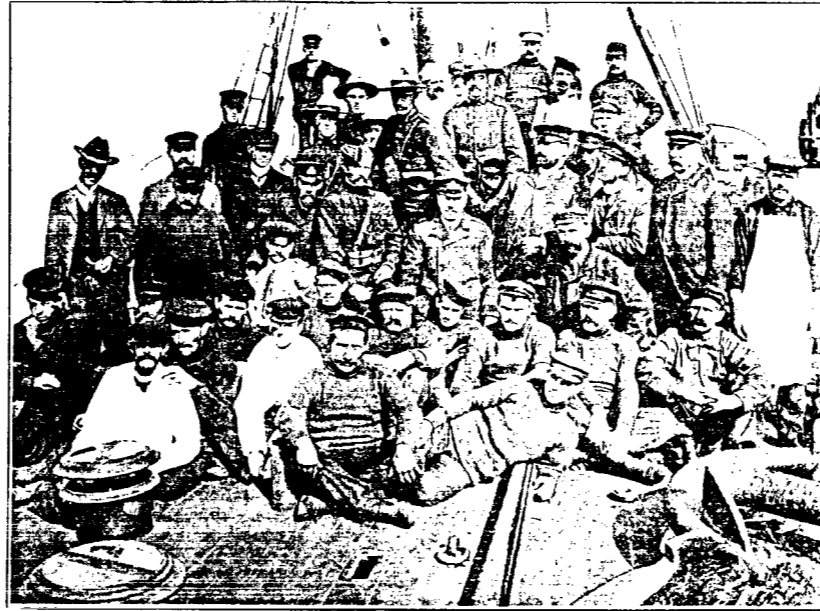
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**BOVRIL LIMITED, - MONTREAL**

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from The Canadian Marine, A History of the Department of Marine and Fisheries, Ottawa, November 30th, 1905.

# CARRY ON METRIC

## METRIC PREFIXES

mega (M) means million  
kilo (K) means thousand  
deci (d) means tenth  
centi (c) means hundredth  
milli (m) means thousandth

## Length Distance

Base unit : metre (m) - approximately  
equal to a long pace  
Multiple : kilometre (km) = 1,000  
metres (m)  
Submultiple : centimetre (cm) =  
1/100th metre (m)  
millimetre (mm) =  
1/1,000th metre (m)

## Area

Base unit : square metre (m<sup>2</sup>) -  
area of a square with sides  
1 metre  
Multiple : 1 square kilometre (km<sup>2</sup>)  
= 1,000,000 sq. metres (m<sup>2</sup>)  
1 square hectare (ha)  
= 10,000 square metres (m<sup>2</sup>)  
Submultiple : 1 square centimetre (cm<sup>2</sup>)  
= 1/10,000th sq. metre (m<sup>2</sup>)  
1 square millimetre (mm<sup>2</sup>)  
= 1/1,000,000th sq. metre (m<sup>2</sup>)

Note: Hectare (ha) is a special name  
given to 10,000 m<sup>2</sup> and is used in  
land surveying.

## Volume

Base unit : cubic metre (m<sup>3</sup>) - the  
volume of a cube with sides 1 metre  
Submultiple : 1 cubic decimetre (dm<sup>3</sup>)  
= 1/1,000th cu. metre (m<sup>3</sup>)  
1 cubic centimetre (cm<sup>3</sup>)  
= 1/1,000,000 cu. metre (m<sup>3</sup>)

Note: The cubic decimetre (dm<sup>3</sup>) was  
given a special name, the litre (l).  
The litre is used for measuring  
liquids. Commercial commodities in  
liquid form are already sold in litre  
bottles.

Unit for  
liquids : 1 litre (l) = 1 cubic  
decimetre (dm<sup>3</sup>)  
Multiple : 1 megalitre (Ml) =  
1,000,000 litres (l)  
= 1,000 cubic metres (m<sup>3</sup>)  
1 kilolitre (kl) =  
1,000 litres (l)  
= 1 cubic metre (m<sup>3</sup>)  
Submultiple : 1 millilitre =  
1/1,000th litre (l)  
= 1 cubic centimetre (cm<sup>3</sup>)

## Mass

Base unit : kilogram (kg) = the mass  
of 1 litre (l) of water  
Multiple : 1 metric ton (t) =  
1,000 kilograms (kg)  
Submultiple : 1 gram (g) = 1/1,000th  
kilogram (kg)  
1 milligram (mg) =  
1/1,000th gram (g)

## Temperature

- temperature is expressed in degrees  
Celsius (°C)  
- prefixes are not used

0°C - freezing point - 32°F  
20°C - mild day - 68°F  
37°C - body temperature - 98.6°F  
100°C - boiling point - 212°F

## ENFORCEMENT EXCERPTS

The following are factual anecdotes  
from enforcement activities in the  
Region.

Fishery Officer to overlimit sportsman  
-- "I'm seizing your fish as they are  
illegal. I'm also seizing this sack  
to take them away in."

Sportsman (indignantly) -- "You can  
take the fish but you shan't take that  
sack, its my property."

Fishery Officer -- "I also have the  
right to seize your gear and boat."

Sportsman -- "Take the sack."

\* \* \* \* \*

Magistrate to fisherman in court at  
Rivers Inlet -- "Are you sure you  
don't want to change this story of  
yours? You know Peter was a fisherman  
and he changed his story."

Fisherman -- "Yes, but Peter didn't  
have to fish Rivers Inlet."

\* \* \* \* \*

Fishery Officer to skipper of a  
longliner with a deer hanging up in the  
rigging in April (season is September  
to December) -- "It's not the hunting  
season is it?"

Skipper -- "Well its God damn near."

\* \* \* \* \*

Fisherman to Fishery Officer in court  
just prior to his appearance before  
the Judge -- "I'll probably get \$50  
or five days. I'm not paying a cent.  
I can do five days standing on my head."

Judge to fisherman -- "50 or five days."

Fisherman -- "I have the money right  
here your Honour."

\* \* \* \* \*

Fishery Officer to lady caught selling sport salmon (trying to ascertain if she's over the sport possession limit) -- "Let's see, there was you and your boyfriend and you were on a two-day trip together."

Lady -- "Now see here, that's none of your business."

Fishery Officer (realizing her concern) -- "Well, part of its my business and part of it isn't."

\* \* \* \* \*

Justice of the Peace, in court to fisherman -- "How do you plead, Guilty or Not Guilty?"

Fisherman's wife, standing alongside him -- "Guilty, you're Guilty, you know you're Guilty, tell the man you're Guilty."

Fisherman -- "Yah."

\* \* \* \* \*

Sportsman in marina coffee shop to Fishery Officer (jokingly) -- "Come on, I'm paying your salary, finish that coffee and start checking those boats again."

Fishery Officer (ditto) -- "So you're the cheap so-and-so, I've been looking for you for a long time."

\* \* \* \* \*

Judge, to accused sportsman in court -- "How do you explain why your version of this case is so different from the Fishery Officer's?"

Accused -- "That's easy, the Fishery Officer is a bleep bleep liar."

\* \* \* \* \*

American sports fisherman to Fishery Officer at Rivers Inlet -- "Hey, why don't you guys do something about these Killer Whales up here?"

Fishery Officer -- "We can't do anything about them at all."

American -- "Why not?"

Fishery Officer -- "They're American Killer Whales up here on vacation."

American (weakly) -- "Ha ha."

\* \* \* \* \*

Fisherman, bitter over being apprehended, to Patrol boat Skipper -- "I've got friends in Ottawa and I'm going to wire them. I'll have your job for this."

Skipper -- "If you can get my job for this you can keep it."

G. T. McIndoe

## Spurious Emissions

Elly Brok resigned her job with IFAP on April 18th to accept a position with the Vancouver Human Resources Board.

\* \* \* \* \*

Bertha Henderson, watch-keeper of travel claims and advances, is leaving the Service.

\* \* \* \* \*

Bill Pastuch won the competition for senior fishery officer at Duncan.

\* \* \* \* \*

Herb Lang has resigned his fishery officer position to return to farming on the Prairies.

\* \* \* \* \*

Kent Harper and his wife are parents of a 6 lb. 13 oz. girl as of May 8th.

\* \* \* \* \*

Marjorie Moffat is the new secretary to N.O.B. branch manager.

\* \* \* \* \*

Alf Stefanson has taken over as senior management technician, Skeena district.

\* \* \* \* \*

Audrey Scott and Frank Jamieson have joined the staff of the Pay and Benefits section, Personnel Branch.

\* \* \* \* \*

The office switch-around at 1090 W. Pender is now virtually complete. Warren Parkinson and his crew deserve a vote of thanks for master-minding the move, accomplished despite some formidable obstacles. Some of the locations are as follows:

W. R. Hourston, R. A. Crouter,  
R. N. Palmer - 10th Floor;  
I.F.A.P. - 9th Floor;  
F.I.P. - 10th Floor;  
Northern B. C. & Yukon Division,  
Northern Economics - 8th Floor;

Regulations, Central Coast Division,  
Northern Operations Habitat Protection Unit, N.O.B. Control Unit - 7th Floor;  
North Coast Division, Technical Support Unit - 6th Floor;  
Strait of Georgia Div., Marine Officer, Southern Economics - 5th Floor;  
Fraser River - Johnstone Strait - Juan de Fuca Division, West Coast Vancouver Island Division - 4th Floor;  
Southern Habitat Protection - 3rd Floor;  
Licencing, Information Branch - Main Floor.

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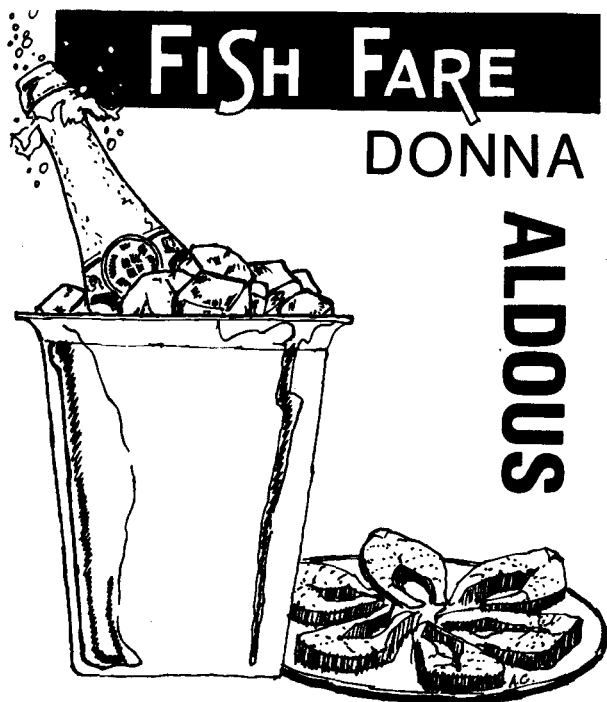
An induction program for new fishery officers has been tentatively set up. Starting with this year's recruits, the largest group in 27 years, the new officers will be rotated in small groups for 2 weeks to 1 month in selected postings to give them a broad range of experience and some exposure to different facets of Fisheries operations. The 17 recruits will probably spend some time in the Fraser Valley, Port Alberni, Rivers Inlet and on tour in a patrol vessel.

\*\*\*\*\*

Courses in forestry, technology, designed to beef up our habitat protection expertise, will be continued on a spiral basis, i.e., anyone who missed out on the first course will be able to take it at a later date and a more advanced course will be offered for those who have already completed the basic course.

\*\*\*\*\*

Also tentatively scheduled is more training in enforcement techniques at different centres in the region.



Just in case you haven't heard: JUNE IS FISH AND SEAFOOD MONTH IN B.C.! It is also the time of year when even the most reluctant of amateur chefs will try their hand at cooking, outdoor style, because it is so easy, and lots of fun.

You don't need complicated equipment for barbecue cooking. Since early times, men have skewered food on sticks to cook over a fire, or buried their food (wrapped in leaves) under the hot coals. Today's cooking is made easy with modern equipment.

Whatever type of equipment you use, be sure to grease the grill and fish thoroughly. Fish takes very little cooking, and so all types and cuts of frozen fish should be thawed to refrigerator temperature before barbecuing. That way, the fish will cook evenly and remain tender.

Timing of barbecued fish is a little difficult since it depends on the temperature of the coals, the distance of the fish from the coals (it should be 3 to 4 inches above), the temperature of the fish before cooking, and the outside winds and temperature. Coals should be medium to moderately hot, and the fish not less than 1/2 inch thick.

You can tell when your fish is ready, by using a fork to part the flesh. If it is milky-white all the way through, your fish is done. If it is overdone, it will flake too easily, and will be dry. One-inch thick steaks will generally require 6 to 9 minutes. If steaks are thin, there is no need to turn them. Turn thicker ones half way during the cooking time, and brush well with melted butter or marinade. All fish need frequent basting and careful watching to prevent overcooking and drying.

B. C. Salmon comes to the fore in summer months, and it is one of the best fish to barbecue, because of its moderate fat content and full flavour.

Whether you want to cook a whole fish, steaks, fillets, or shish-ka-bobs, the following marinade and basting sauce will bring calls for encores.

#### BARBECUE SAUCE

1/4 cup salad oil  
1/2 cup chili sauce  
1/4 cup vinegar  
1/2 tbsp. chopped onion  
1/2 clove garlic  
1/2 tbsp. Worcestershire sauce  
1/4 tsp. salt  
2 tbsp. brown sugar  
2 tbsp. hickory liquid smoke

Combine ingredients until blended. Season steaks and marinate in sauce for one hour or longer, turning occasionally. To barbecue, steaks may be put in a well-greased toaster rack, otherwise directly on greased grill of barbecue unit. Grill over moderately hot coals for approximately 7 - 10 minutes -- or until lightly browned. Baste occasionally with sauce. Turn and cook other side approximately 5 minutes. Test by flaking fish from bone with a fork. Avoid over-cooking. Serve with additional barbecue sauce, preferably heated. Makes 6 servings.

You may grill the salmon whole, even if the head and tail extend 2 or 3 inches beyond the grill edges. To accomplish slow, even cooking, cook slightly higher above the fire, and keep the heat low, with the coals spread evenly under the fish. A barbecue with a hood keeps in the smoke, and allows for greater heat control. If your grill doesn't have a hood, you can cover it with foil, leaving 3 or 4 inches of headspace.

Rinse the salmon in cold water and pat dry. Remove the fins and bones if desired. To preserve the appearance of the head and tail, wrap in oiled, waxed paper and then in foil. Brush with sauce and enclose the fish in a strip of expanded aluminum wire (sold

in hardware stores) and lace the strips together with wire. Place on the grill and cover the barbecue. For extra smoke flavour, add hickory chips to the fire when it is covered with a grey ash. Cook slowly. When approximately half done, turn the fish and brush again with marinade.

Thick steaks (1 to 2 inches) may be done using the sauce to marinate the fish for 1 or 2 hours before cooking. Grease the grill, and use additional marinade while cooking.

Skewer cookery is a versatile method of barbecuing. It can be used on any size of barbecue, for appetizers or a full meal-on-a-stick.

Marinate the boned fish as for the steaks; or use french dressing. Then cut the fish and vegetables (or fruit) into large pieces, about 1 1/2 to 2 inches on a side, and push the pieces close together on a greased skewer. Packed skewers cook more slowly, and center chunks are pinker and juicier.

Leave the skin on the fish, as this will help to hold the flesh together when the fish is cooked.

Baste the skewered foods with the marinade, or if preferred, use butter or oil. A self-basting skewer can be made by threading a bacon slice over and under each piece of food.

Broil over the embers, about 3 to 4 inches from the heat, turning and basting as needed, until salmon is cooked. This will take approximately 10 minutes. Two pounds of salmon steaks will make 6 generous servings.

#### BROILED SALMON KABOBS

2 pounds salmon  
Barbecue sauce  
(or French dressing)

Any combination of:  
cherry tomatoes or tomato wedges, onion wedges or pearl onions (par-boiled), mushroom caps, green pepper cubes, cucumbers or zucchini, thickly sliced cooked sweet potato cubes, small canned whole potatoes.

Cut salmon into cubes, 1 to 1 1/2 inches thick. Leave skin on to hold salmon together. Marinate salmon in barbecue sauce or french dressing for 1 hour or longer. Thread on greased skewers, packing tightly, alternating with vegetables. Brush sauce over skewered vegetables. Broil over embers, 3 or 4 inches above, turning and basting occasionally with sauce, until salmon flakes easily when tested with a fork, approximately 10 minutes. Makes 6 generous servings.

If you like a neat, clean grill, and you don't care to wash dishes, you can cook your dinner all in one package. Campers will welcome this hearty, tasty meal.

#### SALMON DINNER IN FOIL

2 pounds salmon fillets (or steaks)  
6 slices bacon, chopped  
4 medium peeled sliced tomatoes  
2 or more tablespoons chopped onion  
1 1/2 cups potatoes, thinly sliced  
1 1/2 cups fresh green beans, sliced  
3 tsp. salt  
dash pepper

Cut fish into serving size portions. Measure six 18-inch pieces of foil. In centre of each, arrange an equal quantity of fish, bacon, tomato, onion, potato, and green beans. Sprinkle with salt and pepper. Wrap securely and seal well. Place on a bed of hot coals and cook 15 to 20 minutes, turning frequently for even cooking. Serve hot in foil. Serves 6.

For other taste-tempting ideas for cooking fish outdoors, write to me, Consumer Consultant, at 326 Howe Street, Vancouver, V6C 2A5 and ask for the leaflets, "Salute to Salmon" or "Bar-be-cue Cookery with Fish and Shellfish".

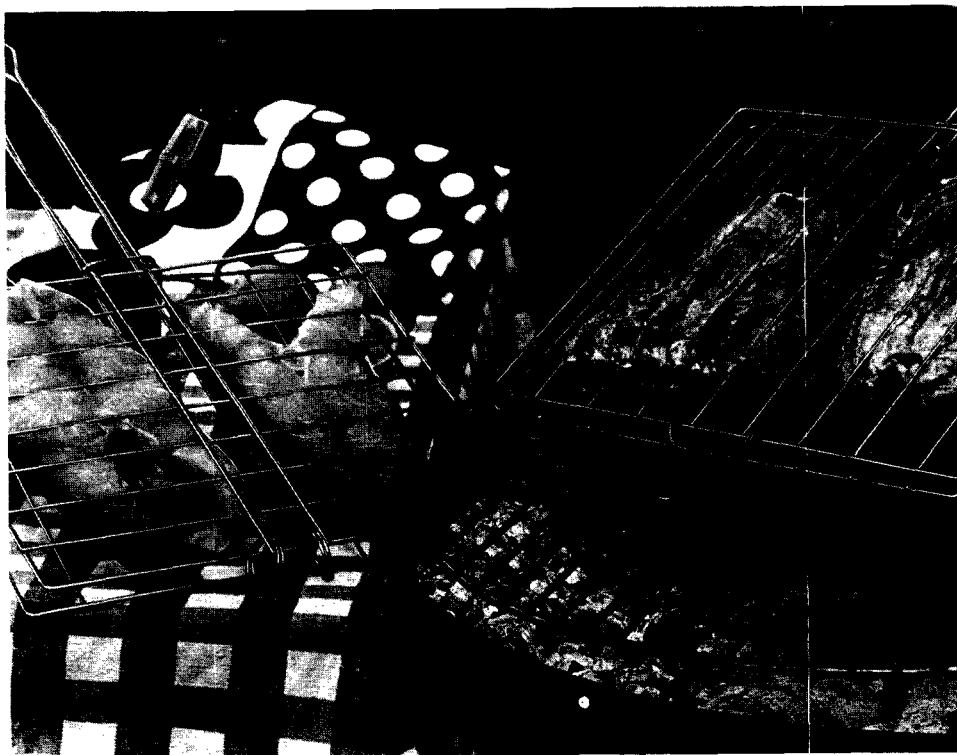


Photo:  
B.C. Fisheries  
Association

# THE WINNERS

The second Sounder photo contest has been judged and the prizes distributed.

There were 44 entries for 7 categories of competition, a disappointing response considering the 206 entries to last year's contest. However, it has to be said that two mail strikes did hinder the announcements of the contest, with the notice of the final extension date arriving the day the contest closed.

Due to the diminished response we decreased the number of prizes accordingly and one winner was selected from each category (ties excepted).

The categories this year were: Fisheries on the Job; Fishing Industry on the Job; Humour; Best Black and White Photo; Best Colour Photo; Public Relations; and Best Series; with the last two being added to accomodate kinds of entries.

The judges were:

Maxine Haugen, Technical Support Unit;

Jim Connor, Chief, N.O.B. Control Unit; and  
Ian Percival, Fisherman's Assistance Plans.

As with last year's contest, each judge independently made his choice for first, second and third in each category. Then, points were awarded for the number of times and placement of an entry in the top three. Thus, a photo appearing as first choice received three points for each first place, two points for each second place, and one point for each third place.

So, the winners are:

## Fisheries on the Job

KONRAD JOHANSEN, Water Chemistry at 30° Below

and

D. OUTRAM, Weighing Herring During Routine Sampling of Commercial Catch (tie)

## Fishing Industry on the Job

JULIUS HAYEK, When You're Hot, You're Hot

## Humour

KEN JONES, No More "Homecoming" For Me

## Public Relations

J. P. TUYTTENS, School Project, Dissection of Sockeye Demonstration

## Best Series

D. OUTRAM, Gillnetting for Herring with Aluminum Skiff

## Best Black & White

D. OUTRAM, Largest Herring Scale in Captivity

## Best Colour

DENNIS DEANS, Takla Landing & Fulton River, Original Counting Site (tie)

We have used only a few examples of the entries in this issue. However, depending on how well the other pictures copy for Sounder purposes, these will be printed in subsequent editions.

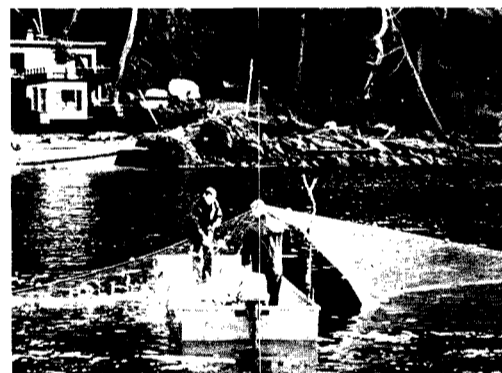


HUMOUR

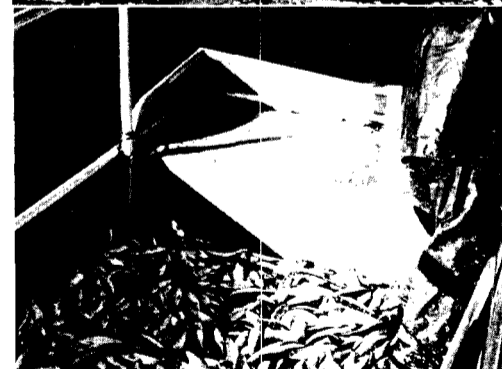
Photo by Ken Jones

No More "Homecoming" Parties For Me

## BEST SERIES



Hauling in net - Long Harbour



The catch



Mending gillnet - Nanoose Bay

GILLNETTING FOR HERRING WITH ALUMINUM SKIFF

Photos by Don Outram

# HERRING ROE 1975

REGION	AREA	GN	%GN	SEINE	%SN	TOTAL	% OF GRAND TOTAL
Queen Charlotte Islands	1	lbs		lbs		lbs	
	2	122 010		20 612 364		20 734 374	
Total		122 010	0.6	20 612 364	99.4	20 734 374	17.7
Northern	3						
	4						
	5			3 308 570		3 308 570	
Total				3 308 570	100.0	3 308 570	2.8
Upper Central	6	4 651 916		1 002 238		5 654 154	
Total		4 651 916	82.3	1 002 238	17.7	5 654 154	4.8
Lower Central	7	7 052 805	70.2	2 992 559	29.8	10 045 364	
	8	396 951	9.7	3 691 144	90.3	4 088 095	
	9	214 500	100.0			214 500	
	10	446 695	100.0			446 695	
Total		8 110 951	54.8	6 683 703	45.2	14 794 654	12.6
Upper East Coast	11	13 505	100.0			13 505	
	12	1 499 996	56.9	1 137 104	43.1	2 637 100	
Total		1 513 501	57.1	1 137 104	62.9	2 650 605	2.3
Middle East Coast	13			734 869	100.0	734 869	
	14	570 563	100.0			570 563	
	15	9 070	100.0			9 070	
	16						
Total		579 633	44.1	734 869	55.9	1 314 502	1.1
Lower East Coast	17	8 759 903	97.0	270 353	3.0	9 030 256	
	18	1 615 239	100.0			1 615 239	
	19	6 170	.3	2 248 496	99.7	2 254 666	
	20	23 930	9.3	241 128	90.7	265 058	
Total		10 405 242	79.1	2 759 977	20.9	13 165 219	11.2
Lower West Coast	21						
	22						
	23	5 851 250	37.5	9 761 323	62.5	15 612 573	
	24	8 511 315	38.2	13 771 523	61.8	22 282 838	
Total		14 362 565	37.9	23 532 846	62.1	37 895 411	32.3
Upper West Coast	25	3 142 233	17.8	14 467 654	82.2	17 609 887	
	26	10 946	100.0			10 946	
	27	940	100.0			940	
Total		3 154 119	17.9	14 467 654	82.1	17 621 773	15.0
Southern Mainland	28	12 800				12 800	
	29						
Total		12 800	100.0			12 800	
TOTAL ALL AREAS -		42 912 737	36.6	74 239 325	63.4	117 152 062	100%
Income		\$4,556,651		\$7,991,145		\$12,547,796	

The herring catch for the 1975 season totalled 58,576 tons for a total landed value of \$12.5 million. Largest catches came from the lower west coast with 32%, Q.C.I. with 18%, upper west coast with 15%, and lower central coast with 13%. The lower east coast recorded 11%. The anticipated gear split of 65/35 for seines and gillnets was finalized at 63% and 37%. Hailed landings were much improved, only 5% high compared with last year when they were 10% high.

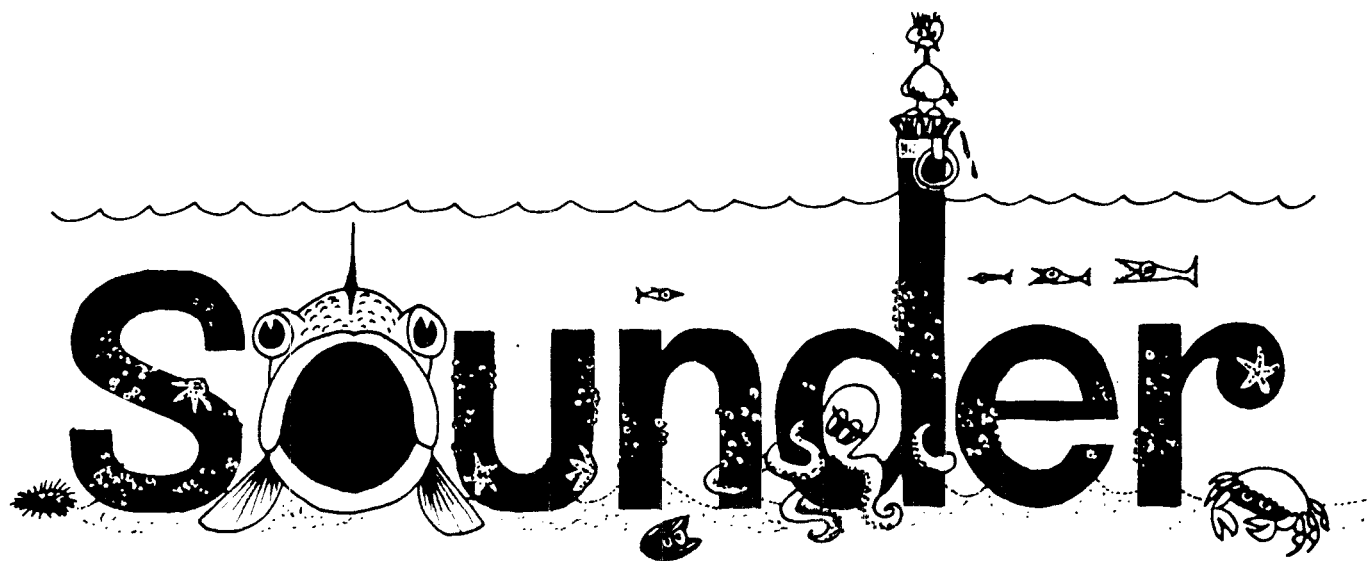
Remember the demands for refunds of herring roe licences this year? Well, three hundred odd roe herring licences were cancelled for failure to pay fees. Three hundred and ten gillnet licences

were not renewed together with 19 seine licences. The licences now stand at 995 gillnet and 205 seines, not including Indian licences.

THE **Sounder**

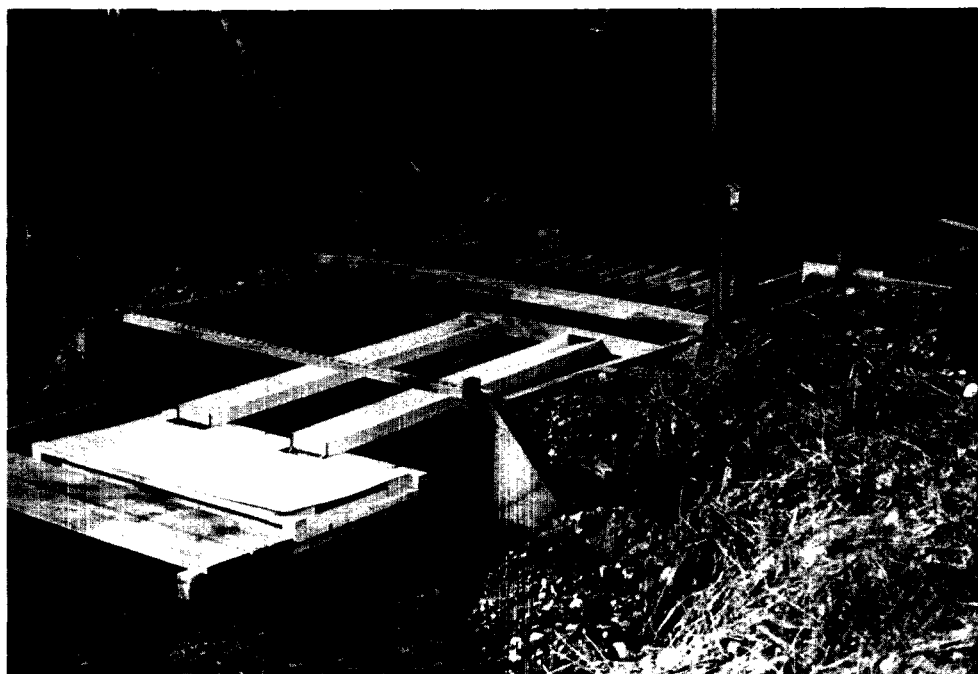
**Kate Glover, Editor**  
**A. Chan, Layout**  
**1090 W. Pender St.,**  
**Vancouver 1, B. C.**

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JULY-AUGUST 1975 Vol. III No. 4

Fisheries and Marine Service



Wolf trap on Inches Creek for wild chum fry enumeration.

## BLANEY & INCHES CREEK 1974-75

Operations at the Blaney and Inches Creek upwelling incubation box sites are complete for the 1974-75 season. The Blaney Creek site, containing three incubation boxes with a capacity of 1.5 million eggs, is located in the U.B.C. Research Forest near Haney and has been in operation since 1972. The Inches Creek site, located about two miles east of Dewdney, contains two incubation boxes with a 1.0 million egg capacity and has been in operation since 1970. Future plans include 12 box installations at both sites with a total capacity of six million eggs. The major objective of these two projects is to increase the present minor runs of chum salmon in these two creeks to an economically significant size.

Incubation boxes are an extremely useful technological tool in the scheme of salmon enhancement. The method employs the principle of incubating eggs layered in gravel and supplied with clean, well oxygenated upwelling water. Incubation boxes are relatively inexpensive, mobile, easy to operate, and use only minor amounts of water and small areas of land. This is especially useful in the Fraser Valley where land costs are high and competition for the water resource is intense. A spawning channel such as that at the Big Qualicum Project uses a land area of over 20,000 square yards and a water flow of 80 cubic feet per second. A comparable incubation box site utilizes a land area of only about 2,000 square yards and a water flow of less than

one cfs. Originally used to incubate chum and pink eggs, incubation boxes have now been used successfully with coho and sockeye eggs.

The procedures employed are essentially the same at both sites. In the fall, adult chum salmon are trapped in the stream and held until mature. Eggs are stripped from mature fish, fertilized, and layer planted in gravel in five cubic yard upwelling incubation boxes. In the spring, fry are enumerated as they emerge from the gravel. Some fry must travel up to three feet through the gravel to the surface, but seem to make it easily.

Last fall, only 300 chum salmon returned to Blaney Creek to spawn. Of these, 84 females supplied 225,900 chum eggs to one of the three incubation boxes. Since coho were abundant at Blaney last fall, and since only one box contained chum eggs, an estimated 21,500 coho eggs were also planted in an incubation box. This spring, 190,000 chum fry and 21,000 coho fry emerged from the incubation boxes for an egg-to-fry survival of 84% and 98% respectively. The high coho survival was especially gratifying as coho eggs are believed to be much more susceptible to handling mortality than chum eggs. Since 1972, egg-to-fry survival at Blaney has averaged 91%. Before release, all chum fry were marked by fin clipping for future identification as adults in the commercial fishery and on the spawning grounds.

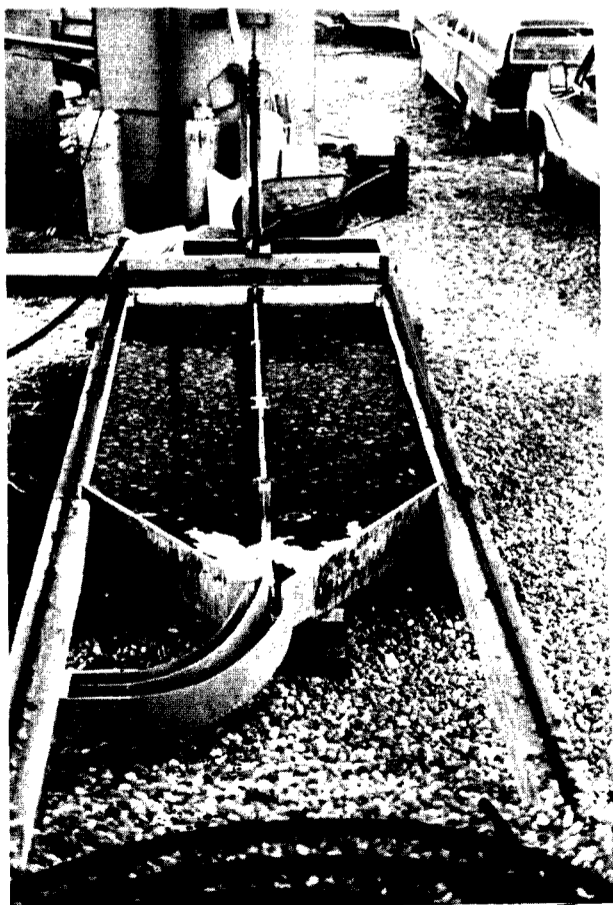
Although the return of chum salmon to Blaney Creek was low last fall, returns to Inches Creek reached an all time high. Returns this year included three and four year old adults from the box plants in 1970 and 1971. Since the incubation box fry were not fin-clipped at Inches Creek, it is impossible to differentiate box fish from naturally produced adults. However, the magnitude of the returns indicate the success of

the project. Chum spawning in Inches Creek since 1949 has ranged from 200 to 3,500 with an average of 1,800. Last fall, an estimated 7,500 chum salmon returned to Inches Creek to spawn.

Egg density studies were carried out at Inches Creek in the 1974-75 season in an effort to determine maximum egg capacity of the incubation boxes. Any increases in egg capacity with no subsequent reduction in egg-to-fry or fry-to-adult survival would increase the benefit-cost ratio of this enhancement technique. To facilitate these studies, a total of 1.265 million eggs were stripped from 437 females and planted in the two boxes. Each box was divided into two separate units by a plywood partition. One side of each box received a normal egg density (100,000 eggs/cu.yd.) to act as a control. The remaining side in one box received a 25% increase and the remaining in the other box received a 50% increase. Fry enumeration this spring showed that the high density sides had only slightly lower egg-to-fry survivals when compared to the normal density controls (1.3% lower for the 25% higher density and 3.3% lower for the 50% higher density). A total of 940,000 chum fry emerged from the two boxes for an overall egg-to-fry survival of 74%. Since 1970, egg-to-fry survival at Inches Creek has averaged 83%.

A Wolf trap, placed in Inches Creek to trap and enumerate all wild fry, indicated a natural production of 700,000 chum fry. This is a natural egg-to-fry survival of about 7%, which is good considering the over-escapement to the system.

This fall should see the first returns of marked three year old incubation box chum to Blaney Creek. Further egg density studies and wild fry enumeration are planned for Inches Creek in the 1975-76 season.



Incubation box at Inches Creek divided by partition for egg density studies.

Summary of Upwelling Incubation Box Results  
for Chum Salmon to May 1975

<u>Inches Creek</u>	<u>1970/71</u>	<u>1971/72</u>	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>
No. of eggs planted	464,000	920,000	793,000	772,000	1,265,000
No. of fry produced	323,000	882,000	713,000	663,000	940,000
Egg-to-fry survival	70%	96%	90%	86%	74%

<u>Blaney Creek</u>	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>
No. of eggs planted	265,000	1,385,000	226,000
No. of fry produced	257,000	1,282,000	190,000
Egg-to-fry survival	97%	93%	84%
No. of fry fin clipped	257,000	253,000	190,000

D. D. Bailey  
A. L. Kahl

## Herring Catch Falls

European scientists have recently had to revise their estimate of the maximum sustainable yield for the North Sea herring because of a sharp decline in the availability of stocks. Out of a Total Allowable Catch (TAC) of 488,000 metric tons, agreed upon by members of the Northeast Atlantic Fisheries Commission (NEAFC) for the 1974/75 fishing season, the actual harvest is only expected to yield 290,000 tons. Until several months ago, these scientists had believed the important 1972 year-class to be about "normal", but they have now revised their estimates to "very poor".

It is reported that the European fishery scientists will propose, at the May 1975 NEAFC Annual Meeting, a reduced North Sea herring TAC of about 150,000 tons for the June 1975-July 1976 season. They may also reduce the small Irish Sea herring TAC, and will most likely propose that the herring catch taken west of Scotland not be increased.

It therefore appears that the adult herring fishery may be on the brink of disaster. As early as December 1973, NEAFC scientists were suggesting that action should be taken to increase adult herring stocks by 100% - 200% over a four-year period. Now the situation has worsened. As an example, Danish fishermen made no significant protests when their Government issued regulations providing for the discontinuance of the herring reduction fishery in the North Sea and the Skagerrak on March 1, 1975,

even though they had only taken 90,000 tons out of a 167,000 ton TAC allotted Denmark for the "quota year" (ending in June, 1975).

U.S. Dept. of Commerce

## ENFORCEMENT

Gary Dawson, a patrolman of 10 days standing, was initiated in rather an abrupt way to enforcement. He and Ned Crotteau, a patrolman with 5 years experience, were on patrol at 1 a.m. on July 17 at Marguerite, 36 miles south of Quesnel, when they came across 8 men with one dipnet in the water. Upon confrontation a scuffle ensued and bottles flew. Four men were arrested and 2 were later charged. R.C.M.P. are still investigating.

## lost:

The photo album containing the winning pictures of the First Annual Photo Contest. Last seen making the rounds of field and district offices. Please return to:

Maxine Glover  
Fisheries Service  
1090 W. Pender Street  
Vancouver, B. C.  
V6E 2P1

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# Spurious Emissions

Peggy Christie, Ron Pasiuk, Darlene Hynek (ex NOB receptionist) and Rick Higgins all recently became engaged. Ron and Peggy will marry in December and Rick and Darlene in November.

\* \* \* \* \*

Maxine Haugen surprised everyone by taking some leave and returning as Mrs. Glover and on June 28th Bob McIlwaine also switched status when he married Mary Stewart.

\* \* \* \* \*

Jack Ellis and Bob McIndoe have both left on extended vacations perhaps leading to retirement.

\* \* \* \* \*

Ian Stout has resigned his engineering technician's position with H.P. North to take a similar position with the municipality of Revelstoke.

\* \* \* \* \*

Brian Lewis, fishery officer in Prince Rupert, has resigned to become a dog-catcher in the same city.

\* \* \* \* \*

Dave Harding returns to NOB in mid August after a year's assignment in Ottawa.

\* \* \* \* \*

Rick Boyd moves mid August from his biologist position in Central Coast to Strait of Georgia Division.

\* \* \* \* \*

Dave Toews joined the staff of S.O.B.'s Habitat Protection Unit on July 7th as forest hydrologist. His watershed management responsibilities will initially involve him in the Carnation Creek watershed study to develop guidelines useful in habitat protection of fish and in hydro right-of-ways and logging referrals.

\* \* \* \* \*

Ken Pitre has won the Acting Division Chief's job for West Coast Vancouver Island.

\* \* \* \* \*

Jim Wild has been with Strait of Georgia Division since May 28th as project engineer. So far his main involvement has been in the design and construction of a new incubation building at Qualicum with storage for 5 million eggs and in preliminary work for possible enhancement facilities at Wolfe Lake and Puntledge River.

\* \* \* \* \*



Photo: Don Outram

## PICTURE TAKING PROWESS

It's Sounder Photo Contest time once again - almost. You will have once again a chance to win prizes and recognition.

If a picture situation grabs your attention and holds it, snap it before it gets away. You are likely to have a strong contender. The picture you choose to enter is likely to be the one you want to show off when you find it in your film processing return envelope. It maybe a shot that came out just as you planned or, even better, surprised you with its effectiveness. A carefully preplanned photograph or a candid action shot --- each has an equal chance of winning.

In hopes of diversifying and simplifying the contest the theme will be "Our Fishery Resource". Entries will be rated in just two categories - colour and black and white. Slides and prints will be accepted and judged for choice of subject matter and photographic skill. Beyond these simple guidelines you're free -- use your imagination. With your trusty Instamatic or that snazzy job the Department provided for you, you have a chance to contribute to the central photo library.

The regional photo library is being built up by T.S.U. to use in slide shows, public displays etc. - really any format that will advance the purpose and the effectiveness of the Department. In a business that in large measure relies on reformed attitudes of the public and interest groups for success in habitat protection and appreciation, the slide and photo build-up is a good method of spreading the word.

So pitch in (and don't forget the fame and fortune). The contest will run from November 1 to January 31, 1976.



You will be interested in the following communiqué released by the Minister's office on July 23rd.

The Minister of State for Fisheries, the Honourable Roméo LeBlanc, today announced the closure of Canada's Atlantic ports to Soviet fishing vessels.

The Soviet fishing fleet made more than 400 visits to Canadian Atlantic ports in 1974.

Soviet overfishing of quotas set by ICNAF (International Commission for the Northwest Atlantic Fisheries) in areas off Canada's east coast brought about the Canadian action. Made under authority of the Coastal Fisheries Protection Act, the closure is effective July 28.

"Over the past year, the Soviet fleet has consistently overfished certain of its quotas," Mr. LeBlanc said. "Repeated attempts by Canada to bring these practices to a halt have met with no satisfactory response from Soviet authorities."

Prime Minister Trudeau is writing to Premier Kosygin to emphasize Canada's concern over Soviet fishing practices. Allan J. MacEachen, Secretary of State for External Affairs, expressed this concern to the Soviet Ambassador on Monday, July 21, and informed him of Canada's decision to close Atlantic ports to Soviet fishing vessels.

Among the major instances of Soviet overfishing has been the Soviet fishery for capelin. In June, 1974 Canada made repeated attempts to convince the Soviet authorities to halt their capelin fishery in an area near Newfoundland (ICNAF Sub-Area 3) after Canadian surveillance indicated that the Soviet fleet had reached

or exceeded its quota. Despite continual diplomatic representations in Moscow and Ottawa, the Soviet fleet continued to fish and by Canadian estimates overran its 85,000 metric ton quota by between 67 and 75 per cent.

In 1975, the Soviet capelin fleet has shown the same disregard for ICNAF regulations. The Soviet capelin fishery near Newfoundland's Avalon Peninsula (ICNAF Division 3L) has exceeded its 28,000 metric ton quota, according to Canadian estimates, by more than 100 per cent. The Soviet capelin fishery on the southern Grand Banks (ICNAF Division 3NO) has also exceeded its 62,000 metric ton quota. The Soviet authorities have also been presented with evidence of a large overrun in the silver hake fishery near southern Nova Scotia (ICNAF Division 4X) in 1974, and of significant Soviet overfishing in the 1975 herring fishery in the Gulf of Maine (ICNAF Division 5Y).

The Canadian authorities have also been disturbed at the continuing failure by the USSR to settle outstanding claims for damage to Canadian lobster gear in incidents off Nova Scotia in July, August, and September 1974. Although the Soviet authorities last November expressed their willingness to cooperate in working towards a speedy settlement of the claims, Canadian representations over the last several months have still met no satisfactory response.

"We have used every method available to bring all these matters to the attention of the Soviet authorities," Mr. LeBlanc said, "including a series of meetings in Ottawa and Moscow, and diplomatic notes and other communications. On quota overruns, their only response has been to question our evidence. We know that quotas have been overfished, and we cannot let this situation continue."

"We are also looking closely at the practices of other fleets," Mr. LeBlanc said. "The Spanish and Portuguese fleets have been involved in certain violations, using nets with undersize mesh, and discarding large tonnages of species they don't want without keeping records as required by ICNAF rules. Attempts to work through ICNAF to halt these practices have failed. Direct approaches had not previously been made to the Spanish and Portuguese governments on these matters, unlike the case of the USSR. Accordingly, the Atlantic ports will not be closed to their fishing vessels at this time. However, we are now making these same direct approaches to the Spanish and Portuguese governments, and if the performance of their fleets does not improve immediately our ports will be closed to them as well."

Soviet access to Canada's Pacific ports under the 1971 Canada-USSR bilateral treaty for the West Coast (extended to February 1976) will not be affected. Access to Atlantic ports will be allowed only in cases of distress and emergency (force majeure).

"Soviet vessels provide only part of the business our ports get from foreign fleets. Nevertheless, the cessation of Soviet fishing fleet visits will have some negative impact on port revenue," Mr. LeBlanc said. "This is however far outweighed by the importance of our own fishing industry to the economy and by the need to protect the fish stocks off our coast."

"We deeply regret that it has become necessary to close our Atlantic ports to the Soviet fishing vessels," Mr. LeBlanc added. "We hope that this action, taken together with diplomatic representations at the highest level, will bring about a change in Soviet fishing practices and the assurance of adherence in the future to ICNAF regulations."

## General-ly Speaking

The nature of our organization in Pacific Region Fisheries Management is a subject which continues to occupy much of the time of quite a number of us. Progress is not always as rapid as I would like although we are certainly moving ahead with our plans. I recently met with Dave McEachran (ADM Fisheries Management) and the other Fisheries Management D-G's to review organizational plans in Ottawa and the five regions. Many of you will be interested to learn that Cliff Levelton has been appointed to the position of Director-General, Fishing Services, and is one of three Headquarters D-G's reporting to Dave McEachran.

The proposals from across the country show many differences which reflect different businesses, traditions and ways of operating. However, it is becoming clear that we will all be moving towards a greater degree of decentralization within each region. It is apparent that most regions will establish what I will call for convenience, District Offices. The senior person responsible for each district will have a group of specialists to deal with the many problems that arise within districts. I visualize a team comprised of people with abilities in the areas of enforcement, management and habitat protection in each district with the balance depending on the relative importance of our various responsibilities. I see us moving towards a decentralized system of management that has considerable similarity to that of the B. C. Fish and Wildlife Branch.

We have only begun to consider ways of organizing ourselves within regions and have yet to establish how many districts might be appropriate - it might be as few as two or three. There are a wide range of questions relating to this decentralized organization which will have to be considered and on which I will want to be satisfied that there have been wide ranging discussions. I hope that these discussions can begin in the near future so that some decisions can be taken in early fall and

implementation commenced. You can expect some serious consideration of these matters as soon as Dave McEachran approves the general outline of the Pacific Region organization I have given him. I believe that will be quite soon. Shortly thereafter I will see that our ideas on the decentralized organization will be circulated to you for comment and discussion.

Glen H. Geen

## THE SWINGERS

On Wednesday, June 4th, Fisheries Service held their annual golf tournament at McCleery Golf Course in Vancouver. Invitations were forwarded to EPS, IWB and FRB to participate. Due to the rather wet conditions, the turnout was not what we had hoped for but the 18 golfers that did show up all seemed to enjoy the tournament very much.

The winning team (low net score) was Sandy Argue, William Sinclair, and Bob Halam who combined for an amazing team score of 48 to easily take home the trophy. It was amazing since everyone else thought their results almost unbelievable.

The low gross (Spring Golf Classic) trophy was won by Ray Finnigan who put 5 birds and a very professional 73 on his card. Needless to say no one was close to him and he again accepted the trophy for the 4th time in the past 5 years.

The low gross team award was won by Finnigan, Rapp, Eliassen, and Jones. Ray Stevens had the longest drive, Finnigan, the fewest putts, Eliassen, the closest to the pin, and Bob Halam won the famous Arsenault Trophy (Roy Hamilton declined to defend).

I would particularly like to thank Regional Directors R. Hourston and B. McLaren for their participation and T. Hutton for his usual fine job as master of ceremonies.

R. Eliassen



Butterfat magazine

# THE Sounder

## Letters to the Editor

Dear Kate:

I have been anxious for some time to be a contributor to your breezy little newspaper and in fact I had hoped to break into print on a story about Wally Johnson's behavior, or lack of it, in China. However, I still have not found the time to do this but I have, at least, the urge.

In the meantime I thought your readers might enjoy the irony of the attached editorial which appeared in the March 19, 1975 Globe and Mail. It is interesting to see that some editors give the fish a little credit for survival.

I enjoy the Sounder very much and I wish you the best of success in keeping it up and obtaining staff input as well as giving them enjoyable reading.

Ken Lucas

### FISH DID IT

Let us salute today the kamikaze coho - the brave little salmon who are soon to be turned loose in the Don River to see whether they can survive its dark and dangerous chemistry.

"We know fish will swim through moderately polluted waters," says Alan Wainio, a biologist with the Ontario Ministry of Natural Resources. "They don't linger, but they can swim through." (True. Mankind is probably unique in its willingness to linger in a polluted environment.)

Anyway, we hope the coho that manage to stay alive in the Don are given the credit (or even the Credit) they deserve. We notice a tendency to heap praise on the water rather than the fish. For example, the remark by one official concerning the coho's survival in Lake Ontario: "Now that we've shown what the lake can do..."

The lake? Huge runs of spawning fish in the Credit, Humber and Niagara Rivers represent concentrated reproductive effort on the part of the coho. When the new baby arrives, do we send the bedroom flowers?

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Editor - Sounder,  
1090 W. Pender St.,  
Vancouver, B. C.

The Atnarko River in the Bella Coola Valley has had it's share of stories told about bears and fishermen, with this year being no exception.

Early one morning an eager angler made unsuccessful attempts to catch a

spring salmon. He had tried all his lures, baiting each one with roe and wiping off the excess roe on the seat of his pants. After a couple of hours he got bored and finally lay down to go to sleep. Unnoticed to the sleeping fisherman, a young black bear had wandered onto the scene, smelled fish and immediately followed his nose. It is difficult to say who jumped the highest when the bear sunk his teeth into the rear end of the fisherman, but there was no question about who screamed the loudest. There was a bear running in one direction and a frantic fisherman madly hopping in the other, clutching a large bruise on his posterior.

After hearing about his experience I always ask myself the following question before going sportfishing on the Atnarko, "If I use roe for bait, will some bear be after my ass?"

Lyle Enderud,  
Bella Coola, B. C.

---

Editor:

No doubt the announcement of the massive Salmon Enhancement program for the Pacific Region has everyone interested and optimistic....

Primary objectives will be to undertake feasibility studies so that the most effective application of the monies can be realized. By 1990 it is hoped that the goal will be attained, and that the production value of salmon on the coast will be doubled. But if we don't protect our salmon stocks now, we may not have anything to enhance. Double nothing is nothing.

Here's some facts and figures from one area on the coast, and you can bet your "steering committee" that the other 27 are in the same boat: I have ten seasonal personnel in the Bella Bella Sub-district, four patrolmen, three stationary guardians, and three mobile guardians. (A fourth guardian position was not filled in 1974, and is no doubt lost forever...that's where all those long-legged lovelies came from in Regional office.).

A week ago I was instructed to cut the Sub-district's man-day requirements by 206 man-days, from a total of 838. Required monies were to be cut \$2000 from a total of \$19,779. THAT'S 24 1/2% OF MY MANPOWER AND 10% OF MY FIELD STAFF'S WAGES FOR THE MANAGEMENT OF THE SALMON FISHERY IN AREA 7!

That's not the biggest laugh! How in Hell do you cut an 89-day boat charter that only pays \$9 per day????!! Even the highest paid charter of \$40 per day is an insult in these times when the cost of materials and goods for boats has risen prohibitively. Labour at the local shipyard is \$23 per hour. Fix a boat for a \$9 a day charter?

Someone on my list has to go, and some or all of the rest are going to have to be cut back. Where does that leave the fish? How can we enhance when little is cared for the protection of what we have?

For any of you starry-eyed over the enhancement program that don't realize it, the seasonal field staff is the backbone of the salmon fishery. And if you think it's a joke about not having anything to enhance, then you have never

seen a cracker-jack seine boat crew work behind a boundary. Have a good laugh - BUT IT MAKES ME SICK.

Hugh R. McNairnay,  
Fishery Officer,  
Bella Bella, B. C.



"STRANGE! THEY WERE HERE LAST YEAR!"

## CLASSIFIED

Are you:

- 1) retired
- 2) about to retire
- 3) not going to retire yet?

Do you have:

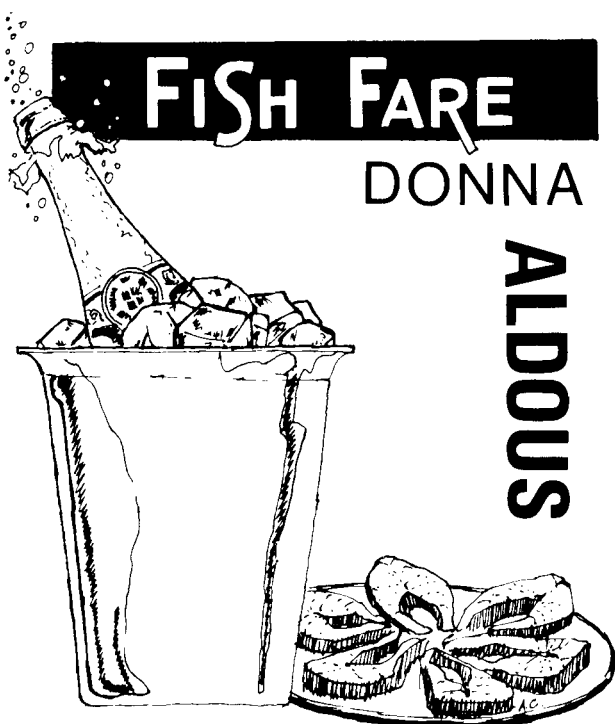
- 1) prints
  - 2) slides
- of the Fisheries Service?

Are you interested in donating or  
lending your collection to the slide

and photo file that the Technical Support Unit is building? (If you wish, we will make copies of your work and return originals). The slide and photo file is available to anyone when giving talks, making displays, etc.

Contact:

Maxine Glover  
Technical Support Unit  
Fisheries Service  
1090 W. Pender Street  
Vancouver, B. C.  
V6E 2P1



King Belshazzar of ancient Babylon entertained his lords with great banquets, which included "a salad of cress, lettuce and endive". Unfortunately for him, the banquet must have been a little too good, for while he and his guests tarried, the Persian armies slipped into the capital and defeated his regime.

If there is a lesson in all of this, I could only suggest it is: "Stick to salad, and forget all the rest". If old Belshazzar had followed this advice, the whole course of history might have had to be re-written.

Olive oil was likely the first to be used to garnish the greens of a salad, and it remains the best. In fact, it was so good, the Greeks, who considered the olive a gift from Athena, anointed not only their salads but their bodies with the oil, but that's another story...

Salads may be as old as recorded time, but they are still as new as tomorrow's love song. The variations are infinite and infinitely delightful. Summer months bring us "salad days", when the living is easy. Fresh fixings are abundant, and within reach of the most limited budget. Fish salads give canned convenience and provide variety in the menus for warm weeks to come. No one wants to cook (or eat) a hot meal when the temperature outside is close to that temperature inside the oven.

Here is a favourite salad-meal of mine; if you really feel lazy, use canned potatoes as well as the canned tuna and vegetables. I first sampled this classic at a tiny sidewalk French café in Toronto, which only proves you don't have to travel to the "old" worlds to live like King Belshazzar.

#### SALAD NICOISE WITH GARLIC DRESSING

2 cans (7 ounces each) solid pack tuna  
1 can small potatoes or 1 cup  
sliced cook potatoes  
1 can (14 ounces) green beans

1/2 cup mild onion rings  
1 1/2 cups garlic dressing  
salad greens  
1 pint cherry tomatoes  
1/2 cup pitted black olives  
4 hard-cooked eggs, quartered  
1/2 green pepper, cut in rings  
1 can (2 ounces each) rolled anchovies  
with capers  
2 tablespoons chopped parsley

#### GARLIC DRESSING

1 teaspoon dry mustard  
1/2 teaspoon sugar  
1 teaspoon salt  
1/2 teaspoon freshly ground black pepper  
1 garlic clove, crushed  
1/4 cup tarragon vinegar  
1/8 cup lemon juice  
1 cup olive oil

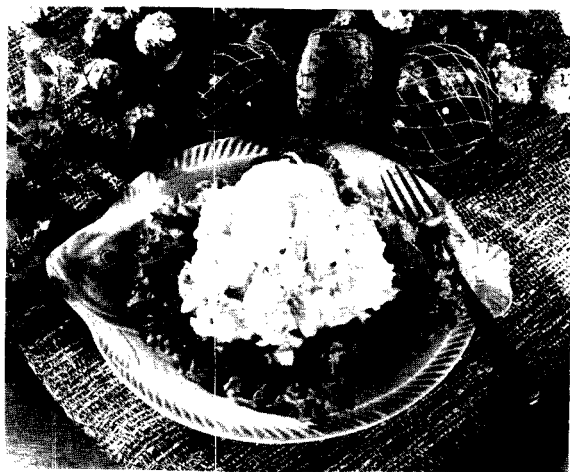
#### To make salad:

Drain and break tuna into chunks; chill. Combine potatoes, beans, onions with the garlic dressing. Marinate the mixture in the refrigerator for two hours, stirring gently two or three times. To serve, line a salad bowl with greens. Drain the marinated vegetables keeping the dressing for use later, and spoon them onto the greens. Put tuna in the middle of the bowl and arrange attractively, tomatoes, olives, eggs, green pepper and anchovies around the tuna. Sprinkle parsley on top. Put the dressing in a serving bowl and pass it to each guest. Makes 5 to 6 servings.

#### To make dressing:

Combine mustard, sugar, salt and pepper. Mix in garlic. Add vinegar and lemon juice and stir to blend thoroughly. Add oil and mix well. Shake vigorously just before serving.

If you have any leftover cooked fish in the refrigerator, resurrect it for this quick, delightful salad. Accompany the dish with hot corn bread or muffins, and iced tea. Ahhh...



#### TOMATOES WITH SEAFOOD DRESSING

1 pound cooked haddock fillets  
1 cup grated carrot  
2 hard-cooked eggs, chopped  
1 tablespoon chopped onion  
1/2 cup mayonnaise  
2 tablespoons lemon juice

1/2 teaspoon mustard  
 1/2 teaspoon salt  
 1/2 teaspoon pepper  
 18 tomato slices  
 6 lettuce leaves

Drain and flake fish, leaving in fairly large flakes. Combine carrot, egg, onion and fish. Combine mayonnaise, lemon juice, mustard, salt and pepper; mix thoroughly. Add mayonnaise mixture to fish mixture; toss lightly. Chill. Arrange 3 tomato slices on each lettuce leaf; sprinkle with salt. Top tomatoes with about 2/3 cup of seafood dressing.

A little curry may go a long way, but this lovely curried shrimp salad won't go too far, certainly not as far as a pesky leftover for the next meal. Watch smiles appear as the salad disappears.



#### CURRIED SHRIMP SALAD

2 cups shrimp or 2 (5 ounce) tins shrimp  
 1/2 cup diced red apple  
 1/2 cup celery leaves  
 1/4 cup diced green pepper  
 1/4 cup salad dressing  
 1/2 teaspoon curry powder  
 1/2 teaspoon salt  
 Lettuce cups

Rinse shrimp and mix with the apple, celery leaves and green pepper. To the salad dressing add the curry powder and salt. Mix all together and serve in lettuce cups. Makes 6 servings.

Finally, a low-cost, last-but-not-least salad, for those of you among us who have better things to spend your monies on than food.

#### SARDINE CABBAGE VINAIGRETTE

3 cans (3 1/2 ounces each) sardines  
 4 cups shredded cabbage  
 1/4 cup chopped onion  
 1/4 cup chopped parsley  
 2 hard-cooked eggs, chopped  
 1/2 cup salad oil  
 1/4 cup vinegar  
 1 teaspoon salt  
 1/2 teaspoon dry mustard  
 1/8 teaspoon pepper  
 1 tablespoon chopped pimiento  
 1 tablespoon chopped sweet pickle  
 Salad greens



Drain sardines and reserve a few for garnish. Cut the remainder in bite-size pieces. Combine cabbage, onion, parsley, chopped eggs and sardines. Make dressing by beating together salad oil, vinegar, seasonings, pimiento and sweet pickle. Pour dressing over salad mixture and toss lightly. Serve on salad greens. Makes 6 servings.

Here's a hint: Write to me for a free copy of our newest recipe book, full of great ideas for fish salads and their dressings. It's called (what else?) Fish 'N Seafood Salads. Bon appetit!

## Training

June 5th, 1975 saw the beginning of one of the first joint Federal/Provincial interagency training programs involving 17 Federal Fisheries and Provincial Fish and Wildlife Branch officers. The course, sponsored and funded by the Fisheries and Marine Service, was an attempt to provide those field officers who attended, with a better understanding of the Forest Industry and logging practices as they relate to Fisheries Management. The principal goals of the course were to develop teamwork in dealing with log-fish problems; develop consistency in the approaches in dealing with log-fish problems; and to provide the knowledge needed to carry out the primary goals.



This unique course, covering 12 days including field trips, was held on the Malaspina College campus, in Nanaimo. Twelve Federal fisheries officers attended; 6 from Northern Operations (Lyle Enderud, Bella Coola; Pat Harvey, Lower Skeena; Keith Hebron, Queen Charlotte Islands; Willie McKenzie, Lower Nass; Bill Robinson, Kitimat; John Stephen, Rivers Inlet); 6 from Southern Operations (Ben Covey, Nanaimo; Trevor Fields, Campbell River; Norm Lemmen, Powell River; Ed Lochbaum, Port Alberni; Frank Voysey, Kamloops; Rob Wilson, Tofino) along with five Provincial Fish and Wildlife Branch officers (Don Campbell, Port Alberni; David Crack, Terrace; David Lewis, Powell River; Terry McGunigle, Nanaimo; and Clive McLeod, Smithers). Malaspina College was chosen because of its centralized location to many varied logging operations for field trips, its record for innovation and its talented Forestry staff.



The original impetus for the course came from George Barber, our Organizational Development officer and Fishery Officer Larry Gray from the upper Nass River. Mr. Barber then contacted Tom Chamberlain (from the Environmental Land Use Committee), Dr. David Narver (Provincial Fish and Wildlife Service), Mr. David Smith (Malaspina College Forestry Instructor) and our own Bill Schouwenburg and Forbes Boyd (Habitat Protection Chiefs, North and South) to help organize and develop the course. The trainers involved were recruited from various interrelated agencies and schools including Tom Chamberlain, Dave Narver, David Smith, David Holmes, B. C. I. T.; Otto Langer, Tom Bird, Mike Brownlee and George McIndoe, Fisheries and Marine Service officials; R. Scarrow, J. Bullen and J. Gilmore, Provincial Forest Service officials; W. Hazeldine, Provincial Fish and Wildlife Branch; and Lands Branch Biologist T. Burns. Our own Bud Graham acted as Academic Co-ordinator and did an outstanding job in helping to organize and develop the course, in addition to recruiting and acting as a liaison to all trainers from the other agencies. I, myself, served as Physical Co-ordinator and tried to make sure all the events ran smoothly and keep people's problems to a minimum.

Enough about participants; the course itself dealt with as many related aspects of the aquatic and forest environment as we could manage in the time allowed.



Because the goal of the course was to present the related problems of the Forester and Fishery Officer and some common answers to these problems, a wide spectrum of topics was covered in short presentation/seminar form. Such topics included the Aquatic Ecosystem (definition of the system, requirements of life history phases); Watershed Analysis and Plan Evaluation (types of watershed planning, development plans, resource folios, slope stability, precipitation and run-off, geology and soils); an Introduction to Forestry (principles of sustained yield, implications of Forest tenure); Roads (location and design, construction, maintenance, culverts and bridges); Cutting Plans (size of cut, cutting areas and layouts, shape and orientation, alternate cutting methods (continuous clear cut, patch cuts, strip cuts, selection cuts), rate of cut); Timber Extraction Techniques and Implications (differences between coastal and interior experience, tractor skidding, ground lead, high lead, skyline, summary of regional differences); Silviculture (fertilizers and biocides, fire and thinning, use and implications); Streamside Management Techniques (risks and objectives, bank stability as a management factor, sediment control, water temperature, food supply, implications of road construction techniques; gravel removal; bridge and culvert construction; dyke and stream diversion; leave strips; slash burning; scarification); Log Transport and Storage Practices (truck, boom, barge, dry sorting, storage, river drives) and finally discussion seminars on enforcement aspects and referrals.

To better illustrate the classroom lectures and presentations the group participated in on-site discussions in field trips to Haslam and Bush streams outside of Nanaimo (examples of the Aquatic Ecosystem); a half day tour of Canadian Forest Products, Englewood Logging Division operations at Woss Camp in the Nimpkish River Valley; a tour of the new dry sort operations at Beaver Cove; and a further all day tour of B. C. Forest Products operations at Nanaimo Lakes. In addition, the two Saturdays of the course were used to introduce the students to other fisheries operations consisting of excellent guided tours to the Big Qualicum River Hatchery (Dick Harvey); the Pacific Biological Station at Nanaimo (Howard Smith) and the Pacific Environmental Institute in West Vancouver (Dr. Mike Waldichuk).

These field trips, in addition to presenting the visual and practical aspects of what was learned in the classroom, helped to promote the concept of a Fisheries Management Team. The field trips to other related Fisheries Service operations introduced both the Federal and Provincial officers to a wide spectrum of Federal Fisheries' ideas, institutions, operations and purposes and left them with a better understanding of Fisheries as a whole. The mingling of these Provincial and Federal officers was perhaps the brightest and most important aspect of the whole course. We are both essentially in the same business (protecting and managing the Province's resources) and can certainly benefit immensely from mutual co-operation. Thus the 12 days of "togetherness" allowed the attending officers ample time to get to know one another and discuss their common problems, "beefs" and accomplishments. After class "bull" sessions were the order of the day from the very beginning, and it was amazing to see how open everyone became after a little liquid nourishment. On the whole, the comraderie of the students was excellent and added greatly to the success of the course and especially to what each individual got out of it.



It is planned to have more of these joint interagency courses (it is hoped Forestry Service representatives in the person of Rangers, will attend all future forestry courses). To better facilitate the planning, input and organization of these future courses, the student attendees have been asked to provide individual paper/critiques of what they thought of the course. It is here that



important and invaluable contributions will certainly come, for it is those in the field who know best what they require to better do their job. Hopefully we will be able to supply them with all that they need and ask for. The critiques are not all in yet, but perhaps some examples or excerpts from them can be published in the next issue of the "Sounder".



Photos: J. Boland

All in all, I believe that the course was a very beneficial experience for all concerned. The interagency idea is excellent and the course proved that such co-operation is essential in our complex world of today. I can honestly say that I have never been more impressed with any group of men than those officers who attended. Our future is certainly bright if these young men are any indication. The trainers too, for the most part, were excellent and the co-operation portrayed by everyone was very gratifying. I hope that there will be many more opportunities to provide such educational programs, in order that we may provide our people with more information and skills to help them do their jobs. Co-operation and teamwork is the key and if the recent Forestry/Fisheries course is any indication, we are on the right track.

James H. Boland,  
Programs Co-ordinator.

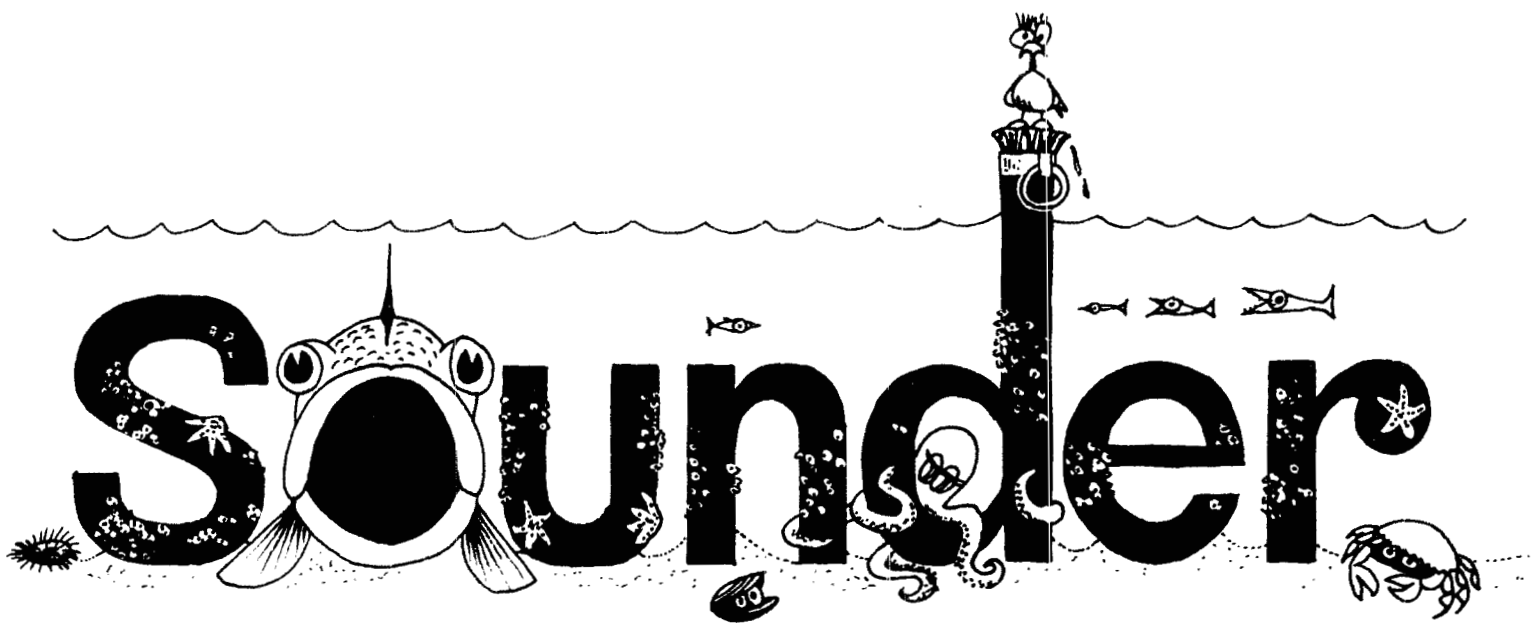
A sourdough, his beard caked with ice, burst in through the saloon door somewhere south of Dawson City, and ordered a bucket of whiskey for his horse. "And what'll you have, stranger," enquired the barkeeper politely. "Nothin'" shot back the weary, freezing rider. "I'm drivin'."

## THE Sounder

Kate Glover,  
Editor  
1090 W. Pender St.,  
Vancouver 1, B. C.

Opinions expressed herein do not necessarily reflect Fisheries Service policy.

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SEPT.-OCT. 1975 Vol. III No. 5

Fisheries and Marine Service



## INDUSTRIAL DEVELOPMENT

Chief: R. H. McIlwaine  
Vessel & Gear Technologist:  
Captain N. Sigmund

Under the terms of the Fisheries Development Act this branch undertakes projects

- for exploration for and development of new fishery resources and new fisheries
- for the more efficient exploitation of fishery resources
- to introduce and demonstrate to fishermen new types of fishing vessels, fishing equipment, and fishing techniques
- for the development of new fishery products
- for the improvement of the handling, processing and distribution of fishery products

SOME PROJECTS CARRIED OUT WITHIN THE PAST FEW YEARS:  
DEVELOPMENT OF NEW FISHERY RESOURCES

Shrimp Fishery - Based on recommendations from earlier survey work carried out by the Pacific Biological Station, the Pacific Trident was chartered during September-October 1972 to carry out exploratory fishing for shrimp off the west coast of Vancouver Island. B. C. Packers Ltd. participated in the project by installing an automatic peeling line at their Imperial Plant to process the Pacific Trident's catch.

The results were considered successful with the best fishing obtained off Barkley and Clayoquot Sounds. This encouraged the owner of the vessel,

Capt. Guy Whyte to move to Tofino where he commenced commercial shrimp fishing for Tofino Fisheries Ltd. in 1973.

The FRB followed up the work of the "Pacific Trident" by carrying out a stock assessment of shrimp on the same grounds. They estimated that annual sustainable yield would be approximately 7 million pounds.

Several vessels have since entered this fishery and landings have increased to approximately 1.8 million pounds.

Exploratory fishing was carried out by the "Willow Point", (Capt. James Pope) in the Queen Charlotte Sound area in 1973 with promising results.

In 1974, a commercial operation was initiated in this area by B. C. Packers Ltd. but due to poor showing of shrimp that year, the results were very disappointing.

The overall potential for a continuing commercial shrimp fishery looks good, however, and developmental work is continuing.

#### DEMONSTRATION OF NEW EQUIPMENT AND FISHING TECHNIQUES

##### Midwater Trawling

Midwater trawling has proven to be a very effective method for fishing redfish and herring on the Atlantic coast.

The necessary equipment and gear was installed on the "Canadian No. 1" in 1970 and on the "Sharlene K" in 1973 to develop and demonstrate this technique on the "Pacific Coast". Although two very successful trips were made by the "Sharlene K" (over 160,000 lbs. of rockfish in two days fishing each trip), midwater trawling has not been adopted as a regular method of fishing by B. C. trawlers.

One of the major reasons for not using the method has been the requirement to change from midwater to bottom trawling on the grounds. With the smaller type of trawlers employed on the Pacific Coast, changing of the trawl doors at sea is both time consuming and dangerous.

During the past year, however, the Industrial Development Branch has been experimenting with a "Russian-type" combination bottom/midwater trawl door aboard the trawler "Eastward Ho".

Following the successful preliminary trials in December, 1973, two other trawlers, the "Gail Bernice" and the "Atlantic Harvester" used this type of door successfully in commercial bottom trawling operations. Further experimental trials carried out recently indicate that the doors will be suitable for midwater trawling.

With the increased number of new trawlers of adequate horsepower, equipped with twin or triple net reels, and the introduction of this combination door, it can be expected that midwater trawling will come into more regular use.

Other current and proposed projects include:

- Demonstration and development of Dutch Twin Beam Trawling for shrimp and other flatfish.
- Introduction and demonstration of the French Polyvalent Trawl Door including a combination aluminum/steel version.
- Introduction of a high reaching bottom trawl.
- Development of hard bottom trawl gear.
- Automated longlining.

##### New Vessel Development

To introduce the stern ramp method of fishing to British Columbia, Bon Accord Fisheries was assisted by the Industrial Development Branch to incorporate the following features into the construction of their new trawler "Caledonian":

- stern ramp
- winches with wheelhouse control and midwater trawling capability
- controllable pitch propellor nozzle
- tunnel stern

The "Caledonian" has carried out over one year's fishing operations since her completion with very successful results. Part-owner and skipper, Dennis Guyan is very pleased with the fish catching and handling aspects of the boat, particularly the stern ramp and winch control features.

Although the vessel has been carrying out only bottom trawling operations it is expected that she will be doing some mid-water trawling during the spring and summer months.

All aspects of the "Caledonian" will be monitored by the Industrial Development Branch for a period of five years so that recommendations can be made for the design, construction and equipping of future west coast trawlers.



Emptying the codend

## PROJECTS SHARED WITH THE PROVINCIAL GOVERNMENT

Quite a number of projects are undertaken on a cost-shared basis with the Province of British Columbia, through the Marine Resources Branch of the Department of Recreation and Conservation. Projects being carried out in the current fiscal year include:

- Resource inventories of seaweeds
- Developmental assistance to develop new products, increase the productivity and market opportunities of the oyster industry
- Development of commercial aquaculture methods for oysters
- Demonstration and development of an automatic fish feeder
- Exploratory fishing for prawns

## CONSULTING SERVICES

In addition to projects, branch personnel provide a consulting service to the industry including:

- advising on new gear developments
- advising on the design and construction of new fishing vessels or in the conversion or modernization of existing vessels, particularly gear handling arrangements
- advisory skipper services to vessels entering new fisheries

As programs under the Industrial Development Branch are completed, reports are prepared and, in most cases, published for distribution free of charge to the industry. Here is a list of publications available in the Pacific Region.

- Trap Fishing Black Cod, British Columbia #81
- Exploratory Shrimp Trawling, British Columbia. #80

- Progress Report, Canadian Pair Seining. By Frank King.
- Radar Marine Electronics Evaluation Project. #41.
- Ferro-Cement for Canadian Fishing Vessels, Volume 4.
- Hold Linings for Canadian Fishing Vessels. #77.
- Report on High Speed Scanning Sonar Development Project, by L. W. Proctor. #45.
- An introduction to design for Ferro cement vessels written by Vessels & Engineering division.

The following reports are results of federal-provincial cost sharing projects:

- Operation Report: Oyster Depuration Plant, Ladysmith, B. C.
- Conference on Fishing Vessel Construction Materials-Canadian Fishing Reports #12.
- Conference on fish protein concentrate -Canadian Fishing Reports, #10.
- Lime from Oyster Shells, #75

Also available are copies of a Directory of Services for Mariners, compiled by the Washington Sea Grant organization.

This is a well bound and printed book, written for vessels ranging the Pacific coast from Alaska to California. It sets out contacts for emergency services such as repairs and refrigeration, hospital customs, marine forecasts, Coast Guard, etc.

There is a ten-page section for British Columbia.

These technical reports are available and will be mailed out on request. Please phone 666-1497 or write to:

Industrial Development Branch,  
Fisheries Service, 1090 W. Pender,  
Vancouver, B. C. V6E 2P1

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## OUR BUSINESS

"So you work for the Fisheries eh? What do you do? Tag fish or something?" How often have you had this sort of questioning - and how do you reply? Well, Section 34 of the Fisheries Act really tells us a lot about why we exist as an organization and every employee should read the Section once in a while to refresh his or her thinking. The old law makers on the hill after deciding what we were to do had Parliament guarantee us the legal tools to do the jobs they wanted done by passing Section 34.

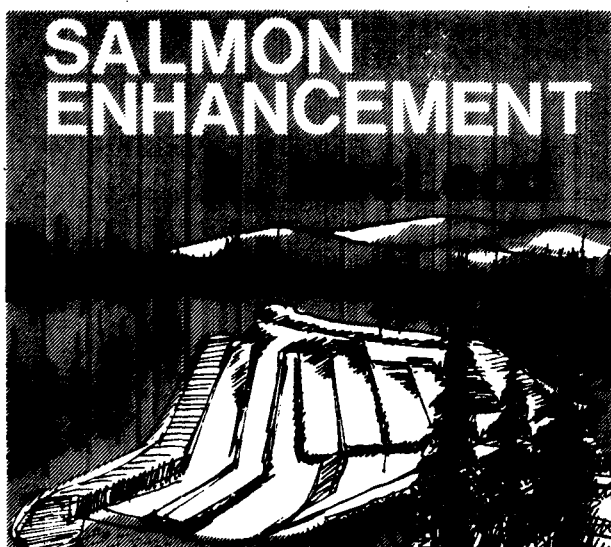
34. The Governor in Council may make regulations for carrying out the purposes and provisions of this Act and in particular, but without restricting the generality of the foregoing, may make regulations

- (a) for the proper management and control of the seacoast and inland fisheries;
- (b) respecting the conservation and protection of fish;
- (c) respecting the catching, loading, landing, handling, transporting, possession and disposal of fish;
- (d) respecting the operation of fishing vessels;
- (e) respecting the use of fishing gear and equipment;

- (f) respecting the issue, suspension and cancellation of licences and leases;
- (g) respecting the terms and conditions under which a lease or licence may be issued;
- (h) respecting the obstruction and pollution of any waters frequented by fish;
- (i) respecting the conservation and protection of spawning grounds;
- (j) respecting the export of fish or any part thereof from Canada;
- (k) respecting the taking or carrying of fish or any part thereof from one province of Canada to any other province;
- (l) prescribing the powers and duties of persons engaged or employed in the administration or enforcement of this Act and providing for the carrying out of those duties and powers; and
- (m) authorizing a person engaged or employed in the administration or enforcement of this Act to vary any close time or fishing quota that has been fixed by the regulations.

- and that is our business!

Bern Hawley



We're back. And a great big hello to you, Hugh McNairney.

Is salmonid enhancement really a bummer? Will it, like some irresistible seductress, destroy our moral fibre and devour all our energies and resources? While it may appear to stand in danger of doing so, I don't now believe that this will be the case. Certainly it need not happen and should not happen.

Salmonid enhancement is an economic development program. It should be treated like all other economic development programs - with caution. We, of all organizations, can not afford to transfer development costs to natural stocks and their environments. It would be incongruous for us to set one standard for other economic developers and then operate by another standard ourselves. Neither should we allow salmonid enhancement to rob our primary business of Protection/Preservation of very scarce human and financial resources. In short, we cannot let the glamour of a pizzaz program such an enhancement blind us to our fundamental responsibility.

How do we avoid the pitfalls? I think we need to have our regional fisheries resource management goals and priorities clearly stated so that salmonid enhancement, one of several tools of resource management, can be brought properly into focus. We don't want to let our eagerness to use this tool over-run good sense in deciding what jobs need doing first. Secondly, I think that we need a budget (many years and dollars) which is incremental to our current resource management budget and, is clearly seen to be incremental. We don't want to take a cut in dollars for servicing Protection/Preservation first because our regional budget happens to allocate dollars for enhancement.

Dr. Geen has already set in motion actions to deal with the problem. He is looking at regional goals and priorities and is, I know, concerned about maintaining our perspective in respect of basic services. There is, also, a budget of \$4.0 million and 45 many years for enhancement for 1976/77 and this budget is, I believe, incremental. Furthermore, having line managers such as Dick Crouter and Rod Palmer involved at both the design and implementation stages will make it difficult to overlook basic Protection/Preservation needs (stock management, enforcement, habitat protection, etc.)

One million dollars have been allocated to planning activities in the current year. A number of studies are in progress: chum tagging on the Queen Charlottes, stock inventory on the Central Coast, chinook and chum surveys on the west coast of Vancouver Island and various engineering and other biological surveys along the entire coast, etc., etc. Almost invariably, the marine biological studies will provide information of value to those responsible for stock management, thereby contributing to Protection/Preservation. There will be even more studies in 1976/77 and there is no doubt that many of these will produce knowledge of immediate usefulness in managing the various commercial and sportfish fisheries, again with salutary effects insofar as Protection/Preservation is concerned.

There is no question that we must protect and preserve the present resource base. As stewards of fisheries resource, we have this primary responsibility to the owners - the people of Canada. Indeed, we should be capable of doing a better job than we have been doing. We are handicapped by shortages of staff and funds, limitations in our knowledge and, unfortunately, rigidity in our thinking and behavior. Nevertheless, a healthy infusion of staff and dollars is, in my opinion, a first requirement, a precursor to any other action to improve our effectiveness. We need this kind of infusion almost as an article of faith, a commitment that this organization really intends to fulfill its primary responsibility.

Having said this, I also must say that we would be poor stewards indeed if we shrank from applying our knowledge and our technical skills to enhance the present resource base. We have spent vast sums of public funds over the years acquiring this knowledge and these skills. We have developed the capability for halting the attrition of the resource base. We have the means for vastly increasing the flow of public benefits generated by this fantastic resource. Should we now bury our talents?

Hugh, your concern is well founded. I and many more have misgivings. The wrong way will be to proceed at the expense of the present resource base. The right way will be to honour this primary commitment while proceeding with enhancement. Let's all work to make sure we do it right.

J. R. MacLeod

## indian consultants

Phill Hall and Barbara Wilson have joined our Service as consultants on Indian employment and participation in the Salmonid Enhancement Program. Their jobs will be big ones. We are looking for ways to break the barriers which inhibit Indian participation in our activities and organization.

We have very, very few Indians working with us and, given current attitudes, small prospect of getting more unless we take direct action to

change the situation. Furthermore, there is the distressing probability that Indians will not share equitably in the benefits generated by salmonid enhancement unless we work hard to create equal opportunities.

Phil and Barbara will work at breaking through the communication barrier. They will carry the enhancement story to Indian communities. They will carry the story of Indian needs to our organization. They will seek to link up our knowledge and technical skills with Indian needs. They will seek out help wherever it can be found - colleges, universities, Manpower, other governmental agencies, etc. - and link these to our own resources and those of Indian communities.

We want Indians employed in the various enhancement activities. We also want Indian communities to become actively involved in habitat restoration and other projects, just as many non-Indian communities and groups will be encouraged to do. We want Indian students to participate and be encouraged to believe that there really are career opportunities available if they complete their education.

Our goals are more Indians employed, more employable Indians and, equitable sharing in the benefits of salmonid enhancement by Indians.

Phil Hall is from Sardis in the heart of the Fraser Valley. Prior to joining us, Phil worked as a recreational counsellor among the Indian communities of the Fraser River watershed.

Barbara Wilson is from Skidegate via Prince Rupert where she worked as a court officer for the Attorney General's department.

Phil and Barbara will be travelling widely during the coming months and, hopefully, you will come to meet them and get to work with them. Welcome aboard!

J. R. MacLeod

## XLI 77 CLEAR

Jack Ellis, the most famous voice on the B. C. Coast for years retires from the service on September 18th. Perhaps best known for his voice outside of headquarters, Jack was seldom seen by most typing the patrol boat reports with earphones clamped on his head, while talking to the field staff. He was most visible here as licencing administrator - cigarette permanently between his teeth, a stack of files in his hand, giving anyone he chose a lecture on "how things should be done". It was Jack who designed the licence plates and it was his selection of the colours for plates and tabs which always seemed to have flair.

There was an epigram that followed Jack - he ran the Ops Room, operated the radio, was licencing administrator, secretary to the Salmon Vessel Licence Committee, the Appeal Committee, the Buy-Back and Sportfish Advisory Committee - if you gave him a broomstick as well he would sweep the floor!

Jack was a one-man band - highly talented in his many diverse duties.

A fascinating story, at Jack's expense, can be recalled. M. O. T. once complained to the Service of misuse of the air waves by Jack Ellis and Bob Mallory - both known for thier hard nosed approach to curb chit-chat on the radio. The incident involved a discussion of an impending federal election between the two, and some amusing telegrams were forged by other members of the Service to Jack. The first telegram was signed by John Diefenbaker that said, "Keep up the good work, appreciate your interest and support". The second telegram from T. C. Douglas said, "Always knew a son from Saskatchewan would do well, Congradulations". The third telegram came from Lester Pearson, "Who the hell is Jack Ellis?" We will sadly miss you, Jack.

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## ROMEO LEBLANC TRADED MID-GAME

### EARNs TWO R.B.I.'s

Recent unconfirmed reports coming out of Ottawa from your Sounder reporter note that some sort of exhibition softball game took place on September 18, 1975. Informed sources say that the Minister, R. LeBlanc, batting in the clean-up spot in the line-up hit a game-winning three base hit driving in two runs.

The Captain of the "Holy Mackerels", Ed Wong, called it "an inside the park homer". The pitcher for the "Red Herrings" Ms. Suzanne Hebert called it "a lucky hit off my best pitch, a rising curve". The captain of the losing team, Don Pepper, when interviewed later noted that he had traded the Minister in the second inning because of "an excess of first basemen. I need a better shortstop".

Other members of the team, when interviewed noted that the Fisheries Team, "Deep Trout" would take the Environmental Mixed Softball Trophy next year if the Minister was added to the team. "We've got everything, a Fisheries song in both official languages, committee-designed T-shirts, an infield of girls from the 6th floor, all we need is the long-ball hitting of the Minister".

Other interviews were held in the Bytown Lounge of the Recreation Centre at the awards ceremony and later at the Irish pub "The Molly Maguires" but your Sounder reporter lost his notes, his voice and his memory so further details are not available at this time.

# TO ARM OR



# NOT TO ARM

for..

The need to arm certain fishery officers is really elementary. Actually there are two reasons for taking this step: 1. to save lives, 2. to enforce fishery regulations.

The fishery officer and the firearm have been together for as long as there have been fishery officers. In years gone by, the firearm was generally a rifle. It has been a tool of the trade just like a pencil, boat or chainsaw. It was carried primarily for protection against bears as well as to destroy what were considered predators at the time.

In recent years, for convenience and ease of carrying a number of fishery officers have requested the compact style of firearm or the handgun. Basically the handgun is identical in function and purpose to the rifle but is constructed with a smaller handle and shorter barrel. The only other significant difference is in the relative power each possesses. The destructive power of the rifle is vastly greater than that of the handgun but the psychological or social power is dramatically in favor of the handgun.

The problem then is not one of whether or not the fishery officer should be armed because he has been armed with departmental high-powered rifles for years. The problem is, should he be armed with the compact model firearm with the low physical power and high social impact?

Guns kill people! Yes, they do, but that does not mean that everyone with a gun kills people. To date no officer has killed anyone with his high-powered rifle. It is unlikely that he would start just because the style of weapon has changed. An officer would only use his weapon to prevent someone from getting hurt, especially himself.

Let us consider the positive side of carrying a handgun. Many potentially dangerous things can have a beneficial effect. Vaccines are really a strain of a disease injected into a subject to produce a mild form of the disease and thereby protecting the subject from a more severe attack of the same disease later on. Handguns can be similar. They certainly are potentially deadly but when used properly can produce beneficial results. Fortunately the benefit of a firearm is not only in the discharging of it. Its very presence in

certain situations can be an effective deterrent to anyone with malice on his mind. It is unusual for a person to become physically aggressive when he realizes that his actions could result in serious injury to himself. In such a case a handgun need not be drawn to have a beneficial effect. Pot shots too are less likely when the aggressor realizes that his targets are armed and capable of retaliation.

A gun then need not kill anyone to have maximum effect.

Not all officers need or want to be armed. In most instances enforcement of regulations is a non-violent activity. Certain locations such as the Fraser River, Skeena River and some areas on Vancouver Island do experience some extremely hazardous encounters, and it is here that armed officers should be considered. Over the years officers in those areas have been maligned as "fish cops". They are indeed! In some of these areas the fishery officer is above all else a "fish cop" and there should be no stigma attached to the term. My hat is off to those people who do this most trying and dangerous job.

But one must wonder what lengths we should go to enforce the regulations. The regulations are the law of the land and the fishery officer is charged with the responsibility of enforcing these laws on behalf of the people of Canada. Like most diligent employees the fishery officer tries his damndest to do his job! Does a technician turn his back on a project he doesn't like or does a typist refuse to type a letter because the words are tough? Neither does an officer turn his back on a serious violation. At this point the problems of the three people become radically different. The first two slug it out with something that doesn't slug back.

Consider now that you are a fishery officer with the responsibility of containing the abuses of the Fraser River salmon fishery. Since the majority of illegal action takes place at night that is when you work. You have already experienced a number of violent incidents including threats on your life. How would you feel about a 3:00 a.m. foot patrol to check on the most frequently used net sites armed with a flashlight and your cool. Walk a mile in his shoes before you disregard this officer as a crackpot for requesting a handgun.

In past years a violator would usually submit to a "pinch" or arrest

without a struggle but today an attempted arrest is often accompanied by an outburst of violence. Reasoning will usually work with the majority of offenders and after a suitable amount of "bluff and bluster" they will normally calm down. If, on the other hand, they continue to be aggressive the apprehending officer is reduced to such emphatic statements as "If you hit me with that axe I'm going to have to call the cops and then you'll really be in trouble!"

Had the officer been armed it is doubtful whether the offender would have considered such a violent action even if the handgun were not drawn. The very presence of a handgun would have considerable impact and probably would have prevented this tense situation.

The alternative is to walk away from the situation promising to return with the RCMP. Unfortunately the RCMP cannot respond to Fisheries needs because they have a wave of violence of their own to try to contain. In other words, we can no longer dump our problems on the RCMP doorstep because they don't have the staff to handle it.

Issuing handguns to fishery officers would be a positive step towards establishing some personal security and more effective law enforcement. However, it is not a solution to the problem. Our whole enforcement philosophy needs re-thinking now! The handgun issue symbolizes a new attitude in enforcement and a departure from the old policy of "soft-line" enforcement. There are two directions to go on this: we can continue to hide our head in the sand playing for time by trying to shift the onus on someone else and hoping that the problem will go away; or we can recognize the problem and grapple with it before someone gets hurt.

I wonder which direction we will take?

## against..

Enforcement is part of a fishery officer's job. It's not the whole job, and it shouldn't be a large part either.

Fishery officers should be information and education officers. A public that is informed and educated will understand goals of the Fisheries and Marine Service, see the reason for the laws, and even know the laws so as not to break them.

We need a public that is on our side. Or, more properly, we should be on the public's side. We are, after all, public servants.

Our job isn't to protect society from itself, or from "criminal elements"; that's the job of the RCMP and similar agencies. Our job is to preserve, protect and maintain the fisheries resource for the maximum benefit of the Canadian people. Where is the violence in that? Where does it say "preserve, protect and maintain...at any cost"?

Besides, the most effective way to accomplish our goals is not to enforce the law, but to educate people to the reasons behind the law.

Let's tell people what we are doing, and why, and we won't have to shoot them.

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## I.W.Y.

International Women's Year is a United Nations Program and constitutes the major event of 1975.

In September, 1974 D. O. E. established an International Women's Year program. As part of this program two seminars will be conducted for F & M staff in November.

The Attitudes Seminar is designed to identify the assumptions and stereotypes that influence the attitudes of both men and women towards the traditional and changing role of women. In order to facilitate group discussion this seminar should consist of about 20 people: 10 men and 10 women. This seminar is of particular value to males in D. O. E. who are required to participate in Selection Boards.

The Career Planning Seminar is designed to assist women assess their interests and aptitudes for career development and to identify skills possessed and training/skills required. Included are a discussion of barriers (internal and external) faced by women in the workforce, a guide to self-appraisal, resume writing, and preparation for an interview.

We have succeeded in passing some legislation to improve conditions for women. Under the law women are allowed more job opportunities. And more educational institutions are giving women equal advantages. But changing attitudes is more difficult than changing laws. There are still many barriers for women. Men still vastly outnumber women in most professions. And despite the fact that men and women are equally affected by our country's problems, the big decision-making is left to male politicians. Because many of us, if we admit it to ourselves or not, still find it difficult to accept women in other than traditional women's roles. And it's not only women that suffer from this attitude. Everyone does. Because when we deprive women of their right to contribute equally to society, we deprive society of the important contributions women can make.

Laws and our cultural background have allowed men to "get there" first. But it's 1975. And we can't afford to waste women-power any longer. Let's change our minds while we change our laws.

# THE Sounder

## Letter to the Editor

Dear Editor:

I would like to make a suggestion that persons who wish to discuss personal problems with the Head of Fisheries and Marine Service Personnel Section (Miss Cook) be permitted to do so in a more private manner than is presently the case. In other words, it would seem appropriate that the Head of this Section be afforded the courtesy of being provided with an enclosed office space.

The writer has visited Miss Cook on two occasions to discuss matters of a personal nature in connection with retirement procedures, and, while I personally know and respect the staff in the Section, I did not feel any privacy was afforded me in discussing my own personal matters with the Head of that Section.

The foregoing is not meant to cast any aspersions on the staff who work under Miss Cook's jurisdiction. However, others have told me that they also feel there should be more privacy afforded them when they wish to discuss personal matters with the Head of the Personnel Section.

Jack Ellis

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Editor:

The question has been raised recently whether or not to arm fishery officers.

To this, I would like to add another. What training will they receive before they are issued guns? The answer, from Obert Sweitzer, is that they will receive 16 hrs. of training from the RCMP.

Well, I don't think that's enough. Maybe two days is enough to teach a man how to oil a gun, and aim it, but there is much more to gun handling than that.

Real law enforcement agencies know this. The RCMP gives 54 hrs. of firearms training in the six months that recruits are at school. The recruits must then qualify for the "crossed arms" badge by receiving a score of at least 245/300 in a shoot. Thereafter, the RCMP have an annual shoot, although there is no pass or fail.

The Vancouver City Policy, although their training may seem less comprehensive, (one solid week gun handling course), attach an ingenious rider to their annual shoot that encourages an upkeep of the training. The annual

qualifying shoots are hinged to pay increments. Fail the shoot, no increment.

Even the fishery officers on the east coast that are authorized to carry guns undergo 34 hrs. of training, more than double what the west coast proposal is.

If our men are going to be armed (notice I did not say "must be armed"), then we must give them the best training available.

Maxine Glover

The Editor:

I think it is about my turn to try and contribute something to the paper. You mentioned many times that field involvement was needed and as others do, I like to procrastinate. However, since coming to Port Hardy, some fairly interesting developments have taken place. A study was carried out at the Port Hardy airport on the population of eagles in the area with respect to eliminating the problem of near misses by aircraft. Their solutions were a bit wild to say the least. Dye the Keogh River; Dust the Keogh River; Put webbing on top of the Keogh River, so the eagles couldn't get at the spawned out salmon, dead pitch the carcasses and lengthen the runway. It appears that they will lengthen the runway, so the jets will be well above the Keogh River after take-off. This is after two years of study.

The biggest and most advanced dry-land sort in British Columbia is nearing completion at Beaver Cove.

The highway between Sayward and Port McNeill is now paved to Woss Camp and the section between Woss and Sayward is supposedly to be paved in a couple of years if the contracts are ever let.

A mechanical clam digger, owned by Seafood Products in Port Hardy, was tested out this spring and appears to be quite successful. It operates on a self-propelled barge and looks like a dredge with a big scoop shovel on the head. The shovel has a number of nozzles on it which clear the sand away and also drive the clams on to a conveyor belt and up onto the barge. There is a space between the head and the conveyor belt which allows the heavier rocks to drop out. Unlike the diggers operated in Washington, the conveyor and head work on hydraulics through the centre of the barge, while the Washington version is operated over the side.

I have viewed the digger in operation as well as gone over the area previously dug. The digger leaves a trench about 18" wide and 6" to 16" deep. From outward appearances the area seems to return to normal fairly rapidly but more checks on restoration would have to be made.

The operation involves two people and in a large clam population, a third would be required. The clams are sorted by hand with a conveyor carrying all undersizes and other debris over the

side. I did not observe a single under-sized clam on the surface in an area that had been worked, indicating that nearly 100% of the small clams dug themselves back in.

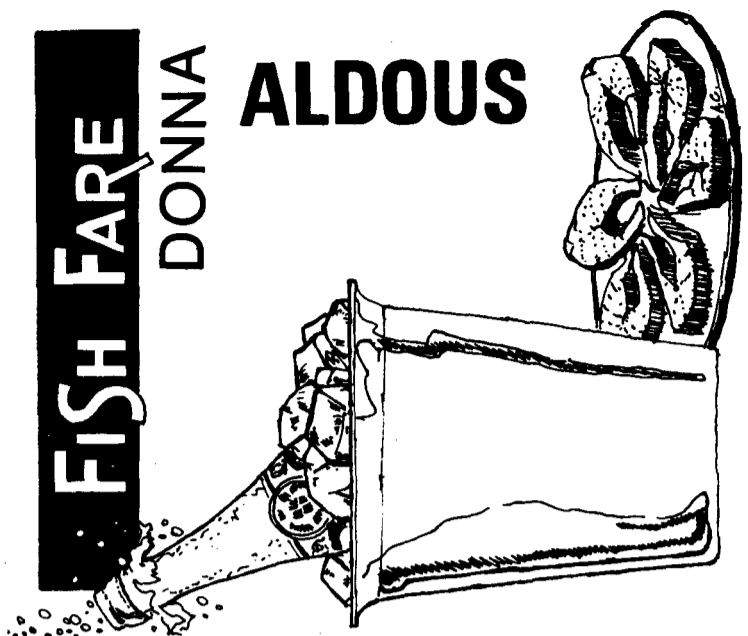
All in all the operation seems a viable means of exploiting clam beds that have not been exploited. One distinct advantage would be no labour problems and an assured product for the cannery. One may have to restrict their height of operation in an area that was used extensively by sport fishermen but this would be no problem. Considering that clams reach a maximum age and then die off, it makes me wonder why no one in our department has seen fit to carry out a study of the effects and benefits such an enterprise might have. Certainly there are good points and bad points to the operation but someone is going to have to make a decision as to whether Seafood Products scraps a \$40,000.00 plus investment.

In the fall of 1974 the pinks spawning in the Nahwitti River must have been startled to hear the sounds of machine gun fire, grenades and mortars. Needless to say it was a combined American-Canadian Amphibious Landing. Expect for a few minor problems, such as the setting off of mines and the intended use of equipment in the rivers, everything went quite well.

I enjoy the Sounder and hopefully some of the other procrastinators in the field will drop an article or so in to your desk.

G. S. Zealand,  
Fishery Officer.

F/O's ON THE NORTH COAST ARE CONSIDERING STRIKING FOR AN 'UNCOLA CLAUSE' - ESSENTIAL ITEMS ARE HIGH ENOUGH, BUT THE COST OF MIX IS PROHIBITIVE!!



#### LUNCH BOX LESSONS

#### -Featuring Fish-

Box lunches are with us again, and while they can be a tiresome problem for the cook, they are often more tiresome for those who open them, day after day, to find the same old sandwich, fruit and cookie.

If you are a lunch-packer, rise to the challenge and get top marks with these tantalizing new fish ideas. The many varieties and forms of fish will ensure interesting lunches in the months ahead, and put you at the head of the class.

#### Lesson 1

#### FISH 'N VEGETABLES (For Low-Calorie Leaners)

Saucy Fish Dip: Cut a variety of fresh raw vegetables into finger-sized pieces, to dip in a container of this delectable fish dip.

- 1 can salmon, tuna or mackerel (7 3/4 ounces)
- 1 1/2 cups sour cream
- 1/2 cup chili sauce
- 1/4 cup chopped pickle or relish
- 1 package French dressing mix
- 1 teaspoon horseradish
- 1 tablespoon lemon juice
- 1 tablespoon chopped chives
- 2 drops red pepper seasoning
- 1/4 teaspoon salt

Blend all ingredients well, refrigerate 2 to 4 hours. Serve with raw vegetables, such as cauliflower, carrot sticks, green onions, zucchini strips, celery, cherry tomatoes, and radishes, for dippers.

Yield: 4 cups

#### Tuna Dip

- 1 can (6 or 7 ounces) tuna
- 1 cup cottage cheese
- 1/3 cup finely diced celery
- 1/4 cup chopped stuffed olives
- 1 cup mayonnaise
- 1 tablespoon lemon juice

Drain tuna and flake. Combine with other ingredients. Cover and chill for 2 hours. Serve with crackers. Makes 2 1/2 cups

## Lesson 2

### SANDWICH FILLINGS

#### Mackerel Sandwich Filling

1 can (7 ounces) mackerel  
1 hard-cooked egg, chopped  
1/2 cup finely chopped celery  
2 tablespoons finely chopped onion  
salt to taste  
1/4 teaspoon paprika  
1/3 or 1/2 cup mayonnaise

Drain and flake mackerel. Combine all ingredients adding mayonnaise for desired consistency. Makes 1 3/4 cups filling, enough for 6 sandwiches.

#### Tuna Filling

1 cup tuna  
1/4 cup finely chopped celery  
1 teaspoon minced green onion or chives  
1/4 cup mayonnaise  
1 teaspoon lemon juice  
Optional: 1 cup finely diced apple, unpeeled.

#### Salmon Filling

1 can (7 3/4 ounces) salmon  
1/4 cup finely chopped nuts  
1/4 cup finely chopped celery  
1/4 cup mayonnaise

## Lesson 3

### SALADS

#### Fancy Tuna Salad

1 can (6 or 7 ounces) tuna  
1 cup diced, unpeeled apple  
1 tablespoon lemon juice  
1 cup celery, cut diagonally in thin slices  
1/2 cup raisins  
1/3 cup salad dressing  
1/4 cup chopped walnuts

Break tuna into bite-size pieces. Sprinkle apple with lemon juice. Toss tuna, apple, celery and raisins with salad dressing. Garnish with nuts. Makes 4 or 5 servings.

#### Macaroni Salad

1 can (7 3/4 ounces) tuna, salmon, or mackerel  
1 cup celery crescents  
1/2 cup chopped stuffed olives  
2 cups cooked macaroni  
1/3 cup mayonnaise  
2 tablespoons French dressing  
lettuce

Drain tuna and break into chunks. Toss lightly with celery, olives, macaroni and blended mayonnaise with French dressing. Serve on crisp lettuce. Makes 3 to 4 servings.

## Lesson 4

### "SOUPER-HOT, AND HEARTY."

#### Salmon Soup

2 small salmon fillets; skin on and cut into small pieces  
4 medium potatoes, peeled and diced  
1 cup diced onion  
1/2 cup celery, diced  
1/2 cup canned milk, condensed  
salt and pepper, to taste

Cook vegetables in approximately 2 cups water, covered, until crisp-tender. Add salmon, salt and pepper, and cook 10 minutes longer. Add milk, reheat and serve.

# PRINCE RUPERT EDITORIAL

While all the province listens to reports from the lower mainland about fish poachers stripping the Chilko run of sockeye salmon from the Fraser River, nothing is said about a situation that has come to light in (the northern) area.

This year already there are three times the number of commercial fishing violations being processed by (Prince Rupert) compared to the same time period last year.

Most of the increase of infractions have concerned fishing outside the surf line, causing the offending boat in actuality to be fishing in a closed area.

Why is there this increase?

Probably several reasons, but two of them are the most obvious.

To begin with, in the last several years boats have been built, and some re-built, to include much larger engines and greater fuel capacity. This means the fishermen are far more mobile. They are more easily able to travel greater distances to be near the centres of the fishing run.

This increase in mobility has meant that more than ever the fleet based in the lower mainland is able to travel to this area, the Skeena and Nass to catch fish.

From the fishermen's point of view this increase in mobility is ideal.

The northern salmon runs, particularly the lucrative sockeye runs on the Nass and then Skeena arrive much earlier in the season than the runs to the Fraser.

There is ample time to fish both areas without the cost of travel being a limiting factor.

What, in essence, this means, is that in an area where there would previously have been a maximum of 400 boats total there are now maybe 700 gillnetters and 200 seiners. At times there is just not enough room for everyone to have their net in the water.

And this leads directly into the second reason.

Several years ago there was a cutback in fisheries protection staff.

One patrolman was dropped from each area. The protection budget for manpower has since been cut even further to the point where some charter boats have either been dropped entirely or their days of patrol reduced drastically.

This year it was after the season actually started that a special allotment of funds was brought through to allow creek guardians in most key places.

What this situation has created is the realization on the part of the fishermen that the Department of Fisheries is grossly under-staffed in the key area of protection.

And some of them are taking advantage of it.

In the Nass this year, there is one protection office, on one boat, with four charter boats assisting.

The officer estimates that to completely patrol his area himself (the area includes all the waters up to Stewart, Alice Arm down to Port Simpson) it would take seven days of continuous travel.

The vessel on which the officer must make his patrols travels at a maximum of ten knots while most of the fish boats travel from twelve to twenty knots.

This means that in order to even appear to cover any amount of territory, the crew of the Fisheries boat must be working 18 to 20 hours per day.

The men on the charter boats must do likewise, and considering they are only paid for 8 hours, there is very little incentive to remain on patrol.

The dedication of these men to the preservation of the fishing industry is what is keeping the fishing grounds from turning into utter chaos, and yet they too are being taken advantage of.

When a violation is noted the patrolman must approach the vessel to note license number, check personal licenses, etc.

Then when he gets back to town there are several hours of paperwork to get each case ready for court. Witnesses must be secured, court time set, in a nutshell a great deal of time is spent. Patrolmen often have to come in from their area, one day to get here, one day in court, and one day to get back to the fishing grounds. With an average of five men per patrol boat this means 15 man days lost for the purposes of protection.

Then, when the case is finally brought to court, as happened recently in Prince Rupert, the fisherman is fined \$5.

From 15 to 20 man days lost for a \$5 fine, and the fisherman either gets the company he works for to pay his fine or asks for time to pay, either way he leaves the courtroom laughing.

What kind of support is this for the man who is busting a gut to try and preserve our dwindling fish stocks, one of our last natural resource foods?

Not much.

In all fairness to the courts, some heavy fines are levied. But not often enough.

Fishing with no personal licences has brought fines ranging from \$5 to \$25. An American vessel apprehended fishing almost a mile into Canadian waters, while fully stocked with electronic gear to tell him exactly where he was, was fined \$250, while in the reverse, one Prince Rupert fisherman found fishing in American waters was fined \$8,000 and eventually had to sell his boat to pay his travel and court costs.

Somehow this difference in penalty doesn't seem fair.

And I would suggest that the American penalties, though devastating to some individuals, are more in line with the deterrent effect necessary to keep fishermen within the laws.

This degree of penalty would indicate a desire on the part of the country to prove they will stand behind their own hired representatives, the protection officers, and show also that they are serious about preserving their fish stocks with an eye to the future, not just the present.

Perhaps it is time we as concerned individuals started to apply what pressure we can in an attempt to get our government to both increase the number of patrolmen and increase the penalties for those who feel they are above the law.

Reprinted from  
Prince Rupert Daily  
News, August 8, 1975.

# Spurious Emissions

The Sounder certainly will miss the services of Allan Chan, our lay-out artist for the last couple of years. Allan has resigned to pursue his drafting career elsewhere.

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Bud Southgate of T. S. U. leaves October 3rd to accept a position with the Highways Department.

\*\*\*\*\*

Roger Kearns has taken up residence in Washington following his resignation as biologist with N. O. B.

\*\*\*\*\*

Kent Harper, Prince Rupert Fishery Officer, left in September to return to the Prairies.

\*\*\*\*\*

Jenny Ritchie of S. O. B. and Economics Branch resigned her position September 5th.

\* \* \* \* \*

N. O. B. staffers may yet find out how indispensable their support staff is: Sharon Landrath, senior clerk in Prince Rupert, has resigned and is moving to Terrace; Marilyn McCarron, Kitimat clerk, left to have and to care for her little boy, born in July; and Sharon Evans, Economics CR, is leaving to enjoy an extended vacation roaming around the Continent.

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Garnet Jones takes over as NBC and Yukon A/Division Chief.

\* \* \* \* \*

Bob McIndoe, holidaying Westcoast Chief, is taking over Phil Murray's duties in Ottawa for a year while Phil moves west to work on the enhancement program.

\* \* \* \* \*

Norman Taylor has joined the Admin. group, replacing Les Thacker as supply officer.

\* \* \* \* \*

Wayne Brandt, ex Yukon Pipeline, was killed when his helicopter crash landed in the Yukon during August.

\* \* \* \* \*

The "other related duties" clause doesn't seem to apply to those painters who moved the furniture at 1090, to do their work and wouldn't move it back again. It seems it wasn't in their contract.

The training team, as has become customary in many FM training programs, was a mix of our own and "outside" sources, consisting of: George McIndoe, Moderating Instructor; James Boland, who wrote the role-plays from 6 actual filed cases; Bill Winsby, Preventative Enforcement and Sports Fishery problems; Kip Slater, Enforcement Rudiments - coastal vs. interior; Obert Sweitzer, Identification Exercises; and moot court defence attorney; Ted Foster, RCMP: Rights of Individuals and Powers of Arrest; Ken Pearson, RCMP: Courtroom Procedures; and moot court judge; George Barber, introduction, and Background to Fisheries Enforcement.

Attendees included: Merv Miller, Patrolman, Gulf Islands; Peter Woloshyn, Fishery Officer, Terrace; Penny Skilnik, Fishery Officer, Nanaimo; Priscilla Comes, Patrolman, Port Alberni; John Wright, Guardian, Squamish; Jim Butterworth, Patrolman, Nanaimo; Josex Alemany, Patrolman, Port Alberni; Ivan Adam, Patrolman, Port Alberni; Dave MacLellan, Fishery Officer, Duncan; Jim Nelson, Patrolman, Pender Harbour; Alfred Hanson, Patrolman, Tofino; Gustav Johanson, Patrolman, Nitinat Lake.

In addition to the two-day rudiments workshop, two modules of Physical Defensive Skills were offered: one in Nanaimo at a school gymnasium; and the other at CFB Chilliwack. The training team for this program consisted of: Jack Delair, CO, Fish and Wildlife, Hope; Terry McGunigle, CO, Fish and Wildlife, Nanaimo; Allan Speevak, RCMP, Nanaimo; and Ken Hokanzono, RCMP Special Unit. Attendees for this section included the above people at Nanaimo and eight Fraser Valley Fishery Officers and Guardians at CFB Chilliwack.

## SONAR-SOUNDERS

## MARINE SAFETY

Planning is in high gear for extended Marine Safety and Sonar-Sounders training programs to be offered January 13 - 14 next in Nanaimo and Prince Rupert.

For the last two years, these programs were piloted by Northern Operations, and were held at Prince Rupert only. For the 1975 program, participants (both trainers and attendees) will be invited from the entire Fisheries Management organization. (Fisheries Management, Pacific, encompasses the Pacific Biological Station, Vancouver Laboratory - U. B. C., Pacific Environment Institute, and Operations.) In addition, a larger number of commercial fishermen will be invited to some of the program modules.

Marine Safety will include three modules: fire and marine safety, involving films, demonstrations, and practical use of flares, etc; in-the-water survival, involving a slide-talk presentation in rented theatres by Dr. Martin Collis of U. of Vic, and in-the-pool demonstrations including

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## ENFORCEMENT TRAINING

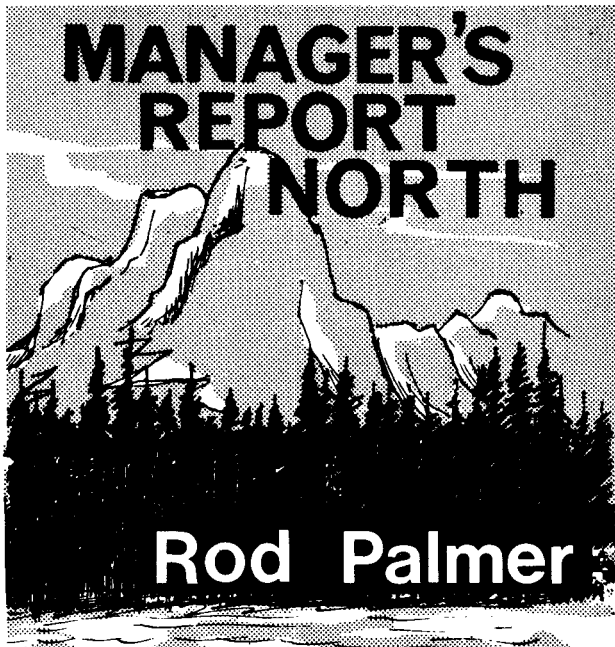
When Rev. George Taylor and Professor Edward Prince sat down and planned out the Pacific Biological station in 1911, they probably hadn't the foggiest notion that, on August 13, 1975, a mock trial would be held there, complete with all the drama of the real thing. With the kind co-operation of Dr. Wally Johnson and the Station staff, a two day enforcement workshop was held in the Station conference room.

This particular workshop was aimed at guardians, patrolmen and Fishery Officers who had no formal enforcement training; it was experimental in many respects, including being held "mid season". It was thought that, in the middle of the action, attendees would come primed up with operational questions fresh from experience. They did. Combined with a format designed for maximum participation, and an excellent team of trainers, the timing seemed to be good.

handling inflatables; and a new one-day St. John Ambulance certificate first aid course. The Marine Safety series is designed primarily for FM Pacific marine personnel of all ranks, including other work groups which work in ships. Recruitment will be through management.

Sounders and Sonar training, under continuous development in line with new herring and groundfish management challenges, will consist of two basic modules: a refresher for persons having taken the previous program; and the "whole bit" for newcomers to the course. In addition, an "overview" seminar will be offered to the FM Pacific Executive, during which, in addition to providing an overview, trainers can receive new ideas, goals, and guidelines on fisheries management challenges. Training must address management needs to be valuable.

This time around, we will have a special honour. The world famous College of Fisheries in St. Johns, Newfoundland is sending their top electronics engineer, Mr. R. Kingsley, to audit our 1976 Sonar-Sounders program. Apparently the body of knowledge and teaching techniques our team has accumulated in electronic fish finding is now number one. Dr. C. R. Barrett, President of the College, decided to sponsor Mr. Kingsley's visit after Peter Ryan visited the College last Spring to give a seminar, share our material, and study their curriculum and teaching methods.



As we come to the end of the 1975 salmon season in the north we can reflect on disappointing catches in many areas. In general, the predictions of poor returns were correct and even those stocks where strength was predicted returned below expectations.

The sockeye returns to the Nass and Skeena Rivers were far below the expected stocks of 0.5 million and 3.0 million fish respectively. The actual return totalled only about 0.2 and 1.4 million fish. Skeena pinks also returned below expectations, i.e., 1.4 million compared with the predicted level of 2.2 million. The return of central coast pinks was, as expected, well below average and the total catch was less than 300,000 pieces. The sockeye return to

Rivers Inlet was slightly better than predicted but was not strong enough to support a significant fishery. On the bright side, the restrictions imposed on the area did result in a good escapement to Rivers Inlet streams. Smith Inlet sockeye also returned below average with a catch in Area 10 of only 60,000 fish. Northern chum returns were generally light with catches in most areas below average. Coho catches have also been very light and stock levels appear to be low.

The fishing industry strike had a major influence on management of the northern fisheries in 1975. It appears to me that the combined fleets of the Prince Rupert Co-op, North Coast Co-op and Central Coast Co-op were adequate to harvest the available surplus this year. I have not heard of any over escapements in northern waters. Had the full fleet been out we would have had a very restricted and difficult season.

I made two short trips to the central coast and two to the Prince Rupert area this summer. I covered some territory that was new to me in the Bella Bella and Bella Coola areas and saw some of the very productive streams of the central coast. I also made a quick survey of Rivers Inlet chinooks but I was unable to demonstrate any abundance of big fish. I heard that the Regional Director was more successful when he tested the area.

The salmonid enhancement program has finally become real in terms of actual work in the field. Although it is a slow start, approximately \$600,000 has been provided for construction and for planning studies in the Northern Operations Branch. The Atnarko River incubation box facility is under construction and will soon be completed at a cost of \$250,000 and funds have been provided for project operation. A number of minor stream improvement projects are underway with \$60,000 being allocated for this work. Bio-engineering studies are being carried out this year to identify potential enhancement prospects for Queen Charlotte Islands chum salmon, central coast pink and chum salmon, and Nass, Skeena and central coast chinook and coho stocks. Approximately \$215,000 have been allocated to these studies. There is also a good indication that the program will be expanded next year and that more dollars and people will be available. I will be looking for active participation of N. O. B. staff in planning of the program.

Policy development and planning for the 1976 herring season is well underway and the Regional working group (R. A. Cruter, R. N. Palmer, A. S. Hourston, C. Newton, C. Campbell and M. Yamamoto) will present proposals to the Regional Executive at the end of September. Many of the recommendations put forward at the N. O. B. herring meeting last May are being examined by the working group and will be included in our management proposals. Discussions of herring management proposals will be held with industry during October and we hope that plans for the roe herring fishery will be completed much earlier this year than in the past.

We recently had a rush call from

Ottawa for work proposals for a Federal Labour Incentive Program (F. L. I. P.) to provide work, particularly in high unemployment areas, during the period November 1, 1975 and May 31, 1976. The northern proposals totalled over 30 M.Y. and \$700,000 and included stream and stock inventories, stream clearance, trail cutting, building and fishway

repair and construction and vessel maintenance. It is not likely, however, that resources will be available for a program of that size in N. O. B. I believe that we can make good use of any F. L. I. P. funds received for work in N. O. B.

R. N. Palmer

## SCHOOL HATCHES EGGS IN GARBAGE CAN

We said it couldn't be done...

### SCHOOL HATCHES SALMON EGGS IN GARBAGE CAN

The students at Caledonia Senior Secondary School in Terrace, and teacher Allen Wootton don't like to hear the words "difficult" or "impossible". These are the words we used back in 1973 when they asked about hatching salmon eggs in a school aquarium. We cited temperature, ionization from the copper piping, light, pH, oxygen content and the necessary water flow as sound reasons for the difficulty. As a substitute, we suggested a basket of egg plant in a small stream, pulling out baskets of eggs throughout the winter to watch egg development.

In 1974-75, the students again undertook a basket plant (all this with the permission and guidance of Fishery Officer Bogart), but this time they also tried hatching salmon eggs in the classroom. Allen Wootton continues the story:

"The major problem we had to overcome was to develop some sort of cooling system. A student, Eva Kerby, suggested a cooling coil of garden hose inside the water container and she found that this worked remarkably well keeping a plastic garbage can (of about 20 gallons) at a temperature of about 6°C. (see figure 1). Water from a tap flowed through the hose and back out again after passing through the coiled hose inside the garbage can.

"The eggs had been in our creek for three weeks when we had this system all ready and we then returned to this site and obtained a basket of eggs. These eggs were placed on the tray and after a week most were dead. We tried a second basket and after removing all dead eggs, placed these on the egg tray, this time with much better success - going from eggs to hatched alevins in January with a survival rate of about 85%.

"We did not change the water in the garbage can at all but kept it circula-

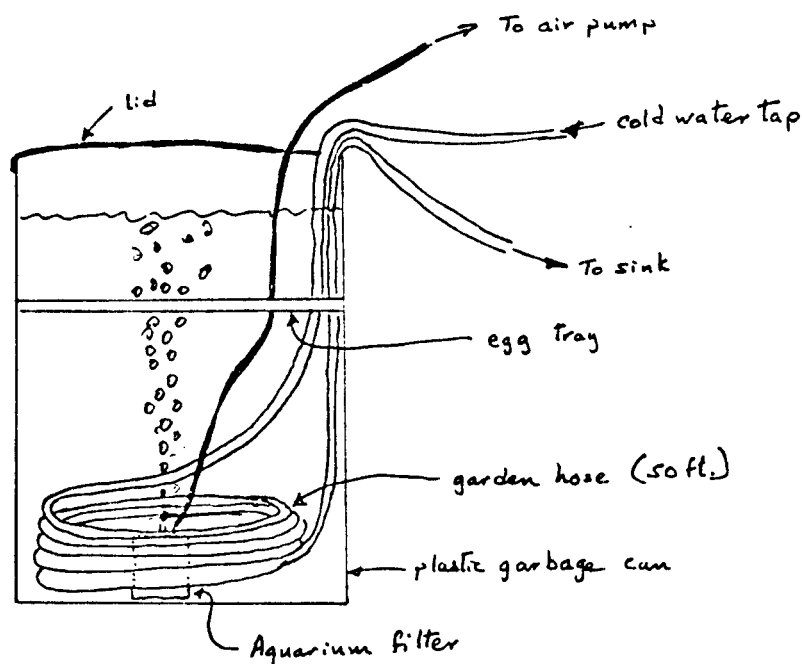


Figure 1. Garbage can hatchery

ting and oxygenated with a standard aquarium filter and pump. The lid was kept on the garbage can except when we wished to look at the eggs as eggs and alevins are very sensitive to light.

"After the eggs had hatched in early January and they were transferred to a blacked out 20 gallon aquarium with the same kind of cooling system and when the egg sac had almost dis-

appeared we exposed the young coho to light.

"At this time we had approximately 150 coho fingerlings and we felt a larger aquarium would be necessary. With advise from Caledonia's art teacher, Dave Comfort, we built two aquariums of about 100 gallons each from 3/4 inch plywood (figure 2).

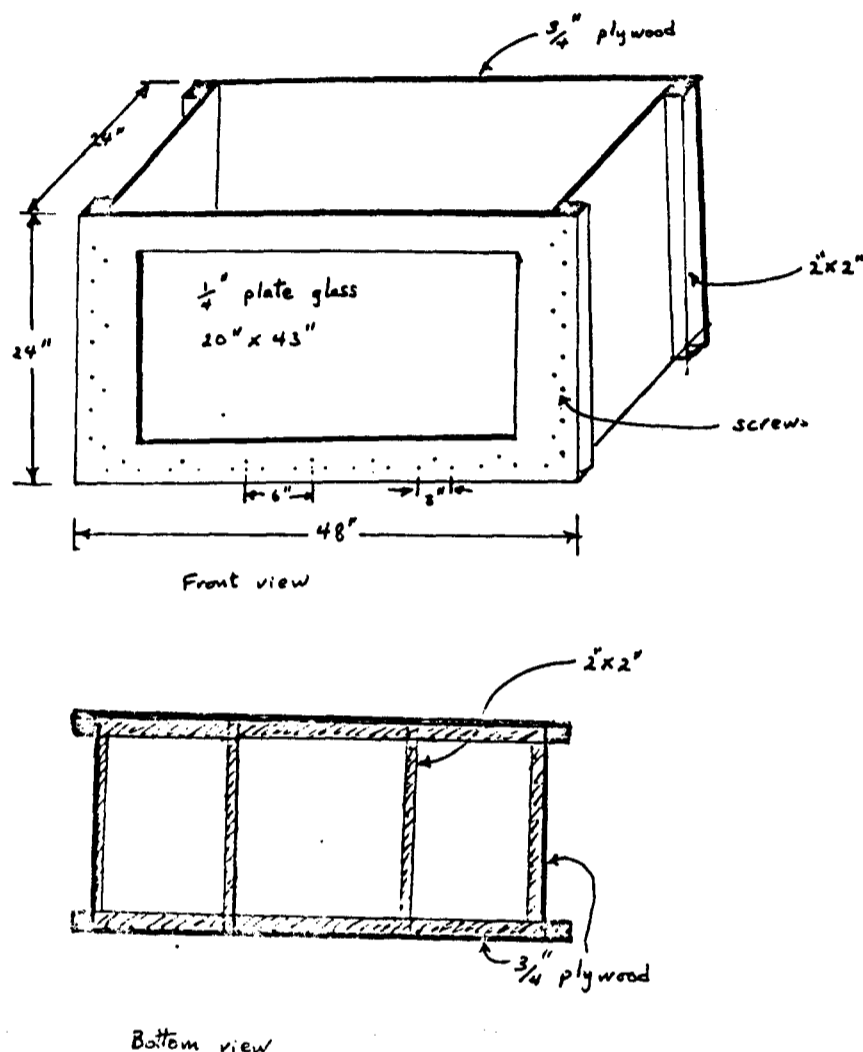


Figure 2. 100 gallon plywood aquarium

"We have had no trouble with these aquariums and cool them with the same method used previously.

"Since the alevins absorbed their egg sacs we have fed them tropical fish food, tubifex worms, earth worms, meal worms, and for the last few months, Oregon B pellets obtained from the Fisheries Service. We have found that feeding is best done several times a day so that the fish pick up most of the food leaving little to contaminate the bottom of the aquarium.

"At present the coho are about 7-10 cm. long and while quite a number died at the time when the egg sac had just disappeared (more aggressive fish monopolize the food), very few have died since - most of these deaths being the result of jumping out of the tank.

"In the aquariums we have coarse gravel on the bottom and we have added plants, crayfish, and fresh water clams. Since we built the aquariums they have been a continual source of enjoyment and interest for everyone. The cooling system is far from perfect, and although it worked very well earlier in the year, since mid-May the temperature has gradually risen until in hot weather the coolest we can obtain is about 18°C.

"We plan to build two more large aquariums for salt water and we hope to be able to introduce the coho into these in the near future. As well we hope to begin the cycle with the eggs again this fall."

Allen Wootton  
Maxine Glover

# SHOCKING CATCH

The use of electric fences to control the movements of salmon in B.C. waters to the advantage of Canadian fishermen is a "wild idea" but one worth considering, Carl Liden has said.

In a report to his constituents, the Delta MLA says that recently he had a discussion with a man "of some experience in directing fish travel and fish habits." The man is not identified.

"The proposal put to me was that an electric fence could be put in place between Vancouver Island and the Gulf Islands, across Dodd Narrows, Porlier Pass, Active Pass, then back to Vancouver Island in the Swartz Bay area, touching on the southern Gulf Islands," the report states.

"The purpose of this fence would be to prevent fish from leaving the Gulf Islands area. The second part of the proposal is that a major fish hatchery be developed in the Cowichan River system that would provide millions of salmon that would venture into the Gulf Islands but go no farther."

Liden added that he thinks the idea is "tremendous" and could lead to the world's "greatest salt water sport fishing area."

Sometime later an electric fence could be laid from the north end of Vancouver Island to Cape St. James, and from the northern end of the

Queen Charlotte Islands to the northern part of the Canadian mainland, Liden suggested.

"The suggestion here is that the entire salmon production, with the exception of that of the west coast of Vancouver Island and the Queen Charlottes, would remain in Canadian waters to be harvested by Canadian fishermen."

Sometimes wild ideas are worth pursuing, the Delta MLA continued.

"We know that the travelling habits of various species of fish can be directed by electric currents. Nuclear stations on the east coast of the United States use electric currents to keep fish away from their water intake pipes. We also know that the USSR in their salmon harvesting use electricity to attract salmon to the intake pipe of their pumps."

Liden concedes that a major project of this type probably can't even be considered at the present time, but he hopes that "we can begin some minor experiments that might prove beneficial to the commercial fishery, the sport fishery, total food production and the economy of the province."

The Fisherman  
June 13, 1975

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# PRINCE RUPERT TRADE FAIR

Prince Rupert had its annual Trade Fair on June 6 - 8 this year, and for the second time, the Fisheries Service was represented.

The theme for our display this year was salmon enhancement. Two films, "New Channels for Sockeye" and "The Life of the Sockeye" were shown continuously, and a slide presentation with a taped narrative by Ron MacLeod on salmon enhancement was shown occasionally. In addition, several fact sheets, brochures and recipe booklets were on display and available to the public.

The walls of the booth were covered with a cotton material printed with a fish motif.

The uniformed fishery officers who manned the booth provided a vital backup to the display as "authorities" of whom to ask questions.

"New Channels for Sockeye" was an unexpected hit, perhaps because of the lively Paul Horn music and the footage of Prince Rupert.

Further information on the booth can be obtained from Kent Harper of the Prince Rupert office, at (624-9137) Rm. 109, 417 - 2nd Avenue West. If you are interested in participating in a Trade Fair or similar function in your community, and need anything, help is at hand! Contact Maxine Glover (666-1727) for more information.

Maxine Glover,  
Information Technician

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## THE Sounder

Kate Glover,  
Editor  
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Vancouver 1, B. C.

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# Sounder

NOV.-DEC. 1975 Vol. III No. 6

Fisheries and Marine Service



## SALMON ENHANCEMENT SIGNING

On November 4, 1975 in Vancouver the Salmon Enhancement Memorandum of Understanding was signed by Romeo LeBlanc, Minister of State for Fisheries and by Jack Radford, Minister of Recreation and Conservation.

Mr. LeBlanc commended Mr. Radford for his "quiet co-operation" over the last 21 months while the program was in preparation. Mr. Radford indicated his full support of the program and said that involvement of various provincial agencies with the Department of Recreation and Conservation would be co-ordinated by the Environment and Land Use Secretariat.

The memorandum puts into effect the formal mechanism for the program and clears the way for federal-provincial co-operation in the preparation of

co-ordinated program proposals.

Mr. LeBlanc told the press conference following the signing of the happy co-operation that Jack Radford and he have had in the preparation of his memorandum of understanding. He also said that they "both feel very good about it now."

Jack Radford reiterated the significance of expanding the stocks of salmon to increase returns to the commercial fishery to \$400 million annually, especially to the people in the coastal communities, while also greatly enlarging the capacity of the sports fishery which already supports one million user-days of angling. The program also will ensure adequate resources for the traditional Indian food fishery.

# PREDICTIONS for the YEAR

## 1976

On previous Occasions, at around this Time, I have usually writ, for the Improvement of my Mind, the Edification of my Readers, the good of my Country, and the universal Betterment of Mankind, my Predictions for the coming year; wherein the Months are set down, the Persons named and the great Actions and Events of the Year particularly related, as they will come to pass. I have had several Letters in Praise of my Performance, besides others which, are now in the Post Office, and never sent me.

Moreover, I have received from a Professor in the University of Utrecht, and from a Reader in Social Studies in I know not where, long Inquiries concerning my Method of Prediction, which hath up till now been shown to be infallible. To the Professor I have sent a long Account, in my own hand; but for the Benefit of the Reader (who did not send me his Address), and of other Scholars and Criticks, I shall give brief Particulars of the Science of politickal Astrology as it relates to parts of the Fisheries.

My Method: To some of my Brethren, the Essence of the Thing is a nice Calculation of Fluxes, Conjunctions, and Meridians, all done according to Leibnitz's Calculus; but, although the Mathematicks are sometimes necessary, yet the Method can be a Trap for the un-instructed, and lead to false Conclusions. In truth there is no Substitute for a close Look-out in the Grog Shops and the Gossip-shop, from which Observation-posts true Predictions may be made, to be polish'd and refined by Mathematicks and by Study of the Planets and other heavenly Bodies.

For an illustration of which, some of you may recall my predictions of the demise of the Former Minister "Fast-Jack" Davies. 'Twas done, not so much by calculation as outlined above, as by a compleat understanding of human nature and an awareness of the various humours that afflict us. These aspects are delineated by occupants of coffee-houses and grog-shoppes and the acute observer may garner a ready-made opinion upon great events and personages.

Much more is required for specific predictions upon lesser mortals, a thorough knowledge of the astrological theories is a good base, but a phlegmatic, perhaps cynical view is perhaps more useful as well as being a frequenter of the Prescott Taverne for news of Court (and for the Irish-volleyballe Faction, The Molly Maguires). Lest I bore the patient Reader with my twaddle let us get to the predictions.

In JANUARY, it will be cold and blizzardes abound. The Fisheries Rehabilitation Steering Committee should have a meeting run over-long and will become snow-bound overnight. Taking heart because of something called Flex-time

they look forward to food and drink from their loyal workers at 7:30 in the a.m. Their chagrin knows no bounds as they are not relieved until almost 9:00 when they are discovered. A memo, the seventh, is issued on Flex-Time.

In FEBRUARY, my Calculations infallibly shewe, the mails will be in service and Ottawa resumes diplomatic relations with the various Regions. Pacific Region sends Plenipotentiaries to negotiate with the money-lenders, terms of the Salmon Enhancement Program. They are viewed with wonder as traders from Muscovy. Finding few friends at Court they depart in a blizzard of snow and promises.

In MARCH, in the counting-houses of the Department much is made of Supplementary Estimates wherein the stewards of the various programs bewail their fate, gnash teeth and invoke the Auditor-General. To no avail programs are cut and two casual employees have their Articles of Indenture broken and become sturdy beggars, a charge upon the parish. There are high winds.

In APRIL, my Lord Lucas delivers an Oration that matters are not as they might be, and that he hath the problem in Hande, although of necessity his Powers are limited. Although there is a Vagueness all hands are pleased at this I know not why. Herring fishermen are long since deported from the grounds and there will be criticisms and polemics in the Public Prints and Newes-Sheets of the Departments handling of the fishery. A Task Force is formed.

In MAY, there are reports of a plot against a certaine Dr. Johnson, this by headquarters people, the Cause being the extream hot weather, and that Dr. Johnson spoke with a loude voice and Authority about bureaucracies and budgets. There are Rumours later proved false, that Headquarters is to be moved to Halifax and that Headquarters people must actually serve in Fishing vessels. A Dr. Newton invents the Longe-Division, a new method of Calculation.

In JUNE, there being fits of frosty weather which will last ten days. Master Levelton, declaims a parable about a Newfound-lander (a type of Dissenter) that causes listeners to burst their britches giving embarrassment to some and employment to tailors. Biologists at Research invente a new fish which can only be caught by left-handed Indians with "A" licences in Area 6 thereby solving the off-year pink problem and other related matters.

JULY is quiet. Master Meyer gives a reading of his workes and is praised although compleat understanding is not in evidence. A Dr. Rozzell eats 42 sea-urchins at one sitting, a cause for wonderment.

AUGUST has a fit of Rumours, Reports

and News. There is an explosion in the Abbotsford beer-parlour and 14 Fisheries personnel are left homeless. Master Stevens of one of the guilds has organized some Rebels to Storm Parliament but this is narrowly averted by the signing of a collective agreement, a sort of Magna Carta. A Maid Glover gives her Opinion that some things are Designed by geniuses for use by Idyotes, although what things she has in mind she refuses to divulge.

In SEPTEMBER everyone is re-organized. This is achieved with the assistance of Dyxon MacKinnon a noted Astrologer. By nice measurements of space and Importance of people all are re-located except for Master Todd who finds he is separated from serving-wenchies and complains bitterly.

There is equinoxial weather and snow upon high ground.

In NOVEMBER the Plot against Dr. Johnson collapses, the casuals are rehired, various retirements ensue and there is talk of Salmon Enhancement. An Accorde is signed with Ottawa and there is a promotion for one of the econo-mystics.

DECEMBER comes on very cold and fishermen return to their homes thereby displacing rogues who had ensconced themselves to help about the house. There are no new Rumours or Plots. The Christmas party will only see two fist-fights and one crying-woman, a paltry occasion. There is snow.

This is the farthest I have proceeded in my Calculations for the new year, but I will continue to keep you informed. God save the Queen.

- THE OTTAWA CORRESPONDENT

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## BUY-BACK

Mr. Doug Bell, Manager of B. C.'s Buy-Back Program from 1970 to 1973, takes on the task of designing, implementing and managing a similar program for Washington State. He assumed office on November 3rd to start a two-year term with a budget of \$3 1/2 million.

Legislation has been passed to buy back boats from non-Indian fishermen. These boats once bought out cannot be sold to Indian fishermen nor can they be used in the commercial fishery again. The intent of the Washington program is to decrease the number of vessels, especially those vessels of lesser value in the gillnet fleet. The vessels eligible for buy-back must have been licenced to fish in the Grays Harbour to Puget Sound area (Washington State licences by area and gear type).

The Judge Boldt decision created economic hardship on most Puget Sound gillnetters and some seiners. Indian fishermen formerly took about 22% of the salmon catch, with the Judge Boldt decision they can now take 50%.

There are about 4,800 gillnets in the Puget Sound fleets and initial indications are that fishermen are in favour of the Buy-Back program. Compared to the B. C. fleet, average value in capital equipment of the Washington fleet is much less. Consequently, the purchase price of these vessels is expected to be considerably less than that offered to the B. C. sellers. It is expected that resale value will be between 15 and 25% of purchase price.

Unlike the B. C. program which had vessels appraised by a representative of the Fishermen's Indemnity-Plan and by an independent surveyor, the Washington program will rely entirely on outside surveyors. Like the B. C. program, monies recovered will be channelled back into the Buy-Back fund.

Some escalation in market value conceivably could occur, as it did in B. C. (with the average price paid per ton increasing from \$1.4 thousand in October, 1971 to \$4.9 thousand in April, 1974). When new U.S. regulations went into effect preventing de-licenced B. C. vessels from entering the American salmon fisheries, the market value per ton declined. With no apparent outlet to re-sell Washington Buy-Back boats or to employ them in commercial endeavour, combined with the fact that this new program will concentrate on relatively inefficient vessels, the same kind of escalation is not expected to take place.

Washington instituted a total temporary moratorium on entry into the fishing fleet one year ago and they are looking at a more permanent licence limitation mechanism to replace this. This could well be in effect by next year. Doug Bell will be involved in the planning of this also, sitting on the Licence Limitation Committee as Co-Chairman.

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As you grow old, you lose your interest in sex, your friends drift away, your children ignore you. There are many other advantages, of course, but these would seem to me the outstanding ones.

### Heard on Radio

It's not worthwhile telling your friends your troubles because half of them don't really listen or care and the other half probably figure you deserve everything you get.

# SPAWN ON KELP

A total of 13 permits were issued in 1975 for propagation and harvest of herring spawn on kelp within impoundments. The 22 applications were reviewed and permits were issued to those individuals who had the most experience in catching, handling and live-holding herring. Special consideration was given to applications received from native Indians. Twelve permits were issued for six tons each of product, and one permit for three tons of product, for a total possible production of 75 tons or 150,000 pounds of spawn on kelp.

The actual production of spawn on

kelp produced in 1975 amounted to 32,503 pounds, and it was produced by nine permit holders, three of whom produced less than 100 pounds each. Four permit holders failed to produce any product for various reasons, including difficulty in obtaining kelp in some areas and difficulty in getting herring to spawn.

Four grades of product were produced and sold in British Columbia in 1975 (Table I). The most desirable product should have a thick, even, complete covering of herring eggs on both sides of the kelp. The preferred kelps are Macrocystis and the Laminarias.

TABLE I. Herring spawn on kelp product grades, and 1975 production by grade.

Grades	Description	Production (lb.)
1	Complete coverage of kelp frond with at least three layers of herring eggs on each side.	20,136
2	Complete coverage of kelp frond with a thin layer of herring eggs on each side.	8,000
3	Incomplete coverage of kelp frond with herring eggs -- patchy.	4,167
4	Loose herring eggs that have peeled off the kelp.	80
	Ungraded product (not sold)	120
		32,503

While no individual permit holder attained his six ton quota of herring spawn on kelp, two permit holders were each within one ton of producing their quota. Six permit holders had successful operations, i.e., they produced enough product to make money on their operations.

Based on these six operations, the costs and returns for producing six tons of herring spawn on kelp for sale to a packing plant in 1975 have been computed (Table II). This table does not include processing costs in a registered packing plant -- some 1975 permit holders were assessed these costs.

The price for roe on kelp paid to the permit holders averaged \$3.08 per pound. The average price if processing costs in the packing plants had not been assessed some permit holders would have been \$2.86 per pound. Costs for materials and supplies to produce six tons of product would average \$5,880, and for labour \$6,000. Costs of 60 tons of herring would be \$13,080. (This cost is absorbed into a seine operation. If a permit holder had to buy herring, it would be an actual expenditure).

Most of the product produced in 1975 was exported to the U.S.A. or Japan. About 4,700 pounds were sold locally in Canada. Prices paid to permit holders ranged from a high of \$4.00 per pound to a low of \$2.80 per pound for Grade 1. Prices for Grades 2, 3, and 4 were lower.

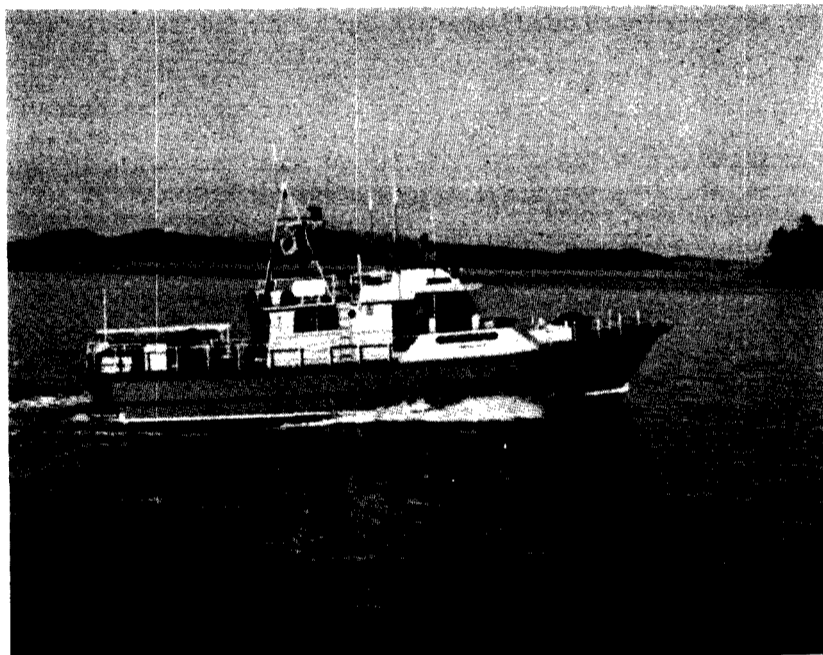
Seven permit holders lost money in their 1975 herring spawn on kelp operation. The loss to these seven permit holders averaged \$3,900, but losses ranged as high as \$6,000.

Costs to permit holders working in Georgia Strait were greater than to permit holders working elsewhere in B. C., as they had to harvest their marine plants (Laminarias) by scuba diver. Macrocystis (giant kelp) is not available in Georgia Strait -- this plant can be hand harvested at low tides unlike the Laminarias which are low-growing, sub-tidal plants which are not easily hand picked at low tide -- the plants which are exposed are often in poor condition, i.e., tattered.

Frances Dickson

TABLE II. COSTS AND RETURNS  
FOR PRODUCING SIX TONS OF HERRING SPAWN  
ON KELP FOR SALE TO A PACKING PLANT  
BASED ON 1975 OPERATIONS

GROSS RETURNS:	\$	\$
12,000 lb. roe on kelp @ \$2.86/lb.		34,320.00
COSTS:		
1. Labour @ 50¢/lb.	6,000.00	
2. Supplies & Materials @ 30¢/lb.	3,600.00	
3. Herring Pond	2,280.00	
	<hr/>	
SUB TOTAL	11,880.00	
4. Costs of Fish; 60 tons @ \$218/ton	13,080.00	
	<hr/>	
TOTAL COSTS		24,960.00
NET RETURNS - BEFORE TAXES:		9,360.00



## THREE NEW PATROL BOATS

Philbrook's shipyards, Sidney, B. C. was the scene for the christening ceremonies of the FPC "ATLIN POST" & FPC "COMOX POST," on a beautiful eighty degree Friday, July 25, 1975 at 1630 hours.

Mr. W. R. Hourston, Regional Director, gave a short speech of interest which included the importance of these vessels in the Department's conservation and development service, also the construction and vital statistics.

In closing he introduced the sponsors, Mrs. M. B. Gay, FPC "ATLIN

POST" & Mrs. R. G. McIndoe, FPC "COMOX POST."

The ladies then christened their respective vessels. With a firm hand the bottles hit the mark, champagne sprayed the bow and the traditional happy task was done. Refreshments were served in the reception rooms at Philbrook's and a good time was enjoyed by all.

Captain M. B. Gay,  
Chief, Marine Unit,  
Southern Operations  
Branch.



Again on August 14th the sun shone as Mrs. Jack Ellis shattered the bottle of champagne over the hull of the new "NORTH ROCK." Built by Enno's Custom Boats Ltd., the "NORTH ROCK" is of molded fibreglass, 50 feet in length and with a beam of 16 feet.

Twin 8V71 General Motors, Detroit diesel engines each developing 270 H.P. and driving 28" x 26" Supertron propellers through Walters V-Drives power the "NORTH ROCK" giving a cruising speed of 15 knots.

This type of installation allows the engines to be placed in the stern of the vessel thereby making ample room forward for accommodation. Only recently has this type of V-drive been developed to handle the horsepower requirements of such vessels such as "NORTH ROCK."



## INDIAN STUDY

*The following is the summary of a recently released report by Michael Friedlaender entitled, Economic Status of Native Indians in British Columbia, Fisheries, 1964-1973.*

The decade was a difficult one for many Native Indians in the fishing industry, the most important industry for British Columbia coastal Indians. The situation is, however, both structurally and geographically quite complex.

Indians declined in number from 19% of all fishermen in 1964 to 12% in 1973; the number of Indian fishermen dropped from 2,498 to 1,387.

At the same time the Indian fleet declined from 18% of all B. C. fishing vessels in 1964, to 14% in 1973. The number of vessels in the Native fleet decreased from 1,284 to 769.

The decline in Native participation is attributable to a number of factors including the Salmon Vessel Licence Control Program, consolidation of the processing sector, and the increased competitiveness of the industry. Those displaced include fishermen unable to adapt to changing conditions, as well as others displaced by structural changes such as cannery closures.

The performance of Native fishermen remaining in the industry is sufficiently high to have prevented any decline in the Native share of fish production in the course of the decade. In 1973, with Native production amounting to 18.8 million dollars, Natives accounted for 14% of all fish caught in B. C. Native production per unit fleet capital value exceeded that of the B. C. fleet as a whole throughout the decade, despite poorer equipment. Performance in the seine and gillnet sectors is particularly good. Important weaknesses were identified in the troll sector and among vessels not assisted by the Indian Fishermen's Assistance Program.

Future prospects are clouded by difficult entry to the commercial fishery for young Natives. This applies even to potentially highly competent fishermen, everywhere except in some unusually successful bands. In addition, weaknesses in the troll sector and the least productive part of the gillnet sector may lead to further reduction in Native participation. Lack of business and planning skills, and difficulties in adapting to a more competitive fishery, may cause further hardships.

At the same time, some of British Columbia's most successful fishermen are Native Indians. Overall, partly because of a scarcity of other opportunities but mainly by longstanding tradition and continuing inclination, Indians throughout coastal British Columbia (except southern Georgia Strait) remain strongly attached to the fishing industry.



Well, another year is coming to an end. This is the time one looks back and asks the question, "What was accomplished that was meaningful?" To find some sort of an answer I took a look at my diary. It is amazing how a year can be compressed into 12 pages. Well, what happened?

January - We went off to Halifax for a three day session on "Design of Management Framework." This was attended by all senior headquarters and regional staff. Very concentrated sessions.

- The Salmon Commission met with its advisors for final comment on the 1975 regulations. I also note that on the 28th we held the final meeting of the Advisory Committee on the Pacific Environment Centre. That afternoon the senior staff and I had our annual session at the U.F.A.W.U. Convention.

February - Started off with a trip to Ottawa headquarters with Dr. Geen for a final review of the program forecast for 1976-77. Also met our new Deputy Minister, Mr. Seaborn.

- To Prince Rupert in mid-month for the annual meeting of the Skeena Salmon Committee. Expectations were really great!

- To Seattle on the 25th to meet with U.S. officials on the problems of convention area salmon management created by the ruling of Judge Boldt. This problem we never really did solve.

March - Started with a two-day in-house meeting with Cliff Levelton on U.S./Canada salmon problems. This was preliminary to a formal meeting with U.S. schedule for May. This meeting kept being deferred and the year passed without one. It is now tentatively scheduled for January. Maybe 1976 will be the year for an agreement.

April - The Regional Board met at E.P.S. headquarters at Kapilano 100.

- Two meetings with Dr. Johnson on the Salmon Mark Recovery Program.
- An afternoon session with Dr. Geen on organization.
- A meeting of the Groundfish Committee to review the bridging program and entry control.

May - Started off on a very sad note -- the funeral of John Buchanan.

- We had a wrap-up meeting on the herring fishery. The Federal/Provincial Fraser River Advisory Board, on which I represent Fisheries, met in

Victoria and Vancouver to review the dyking program on the Fraser and look at preliminary results of an upstream storage study.

- The Minister of State - Mr. Romeo LeBlanc, arrived in Prince Rupert on the 23rd. We had a full day of meetings with representatives of industry and fishing organizations.

- On the 24th we flew him to Babine Lake where he inspected the spawning channels and flow control works on the Fulton River. Mr. McEachran, ADM, Fisheries Management, accompanied the Minister.

June - The annual golf tournament was held at McCleery Golf Course. No luck again!

- The Regional Board met in Victoria on the 10th.
- Our Indian food fish problem began. We met with the R.C.M.P. on the 17th and Provincial authorities in Victoria on the 24th.

- The month ended with a meeting of the Executive of the Vessel Owners to review contents of their Brief to the Minister.

July - Mr. Lucas and Mr. McEachran arrived on the 1st and on the 2nd attended a meeting of the Federal/Provincial B. C. Fisheries Committee.

- On the 3rd we flew to Prince George with the Honourable Jack Radford, Minister, Department of Recreation and Conservation, and Mr. Vernon his A.D.M. We then left on an aircraft tour of the B. C. Rail extension going from Prince George to Dease Lake. Beautiful country! Sad to see the scars this project is leaving along the valleys. We ended the day at Fulton Camp. The next day the party visited the Babine project at Fulton and Pinkut.

- The salmon season started; then the strike.

- Four trips were made to Bellingham on Salmon Commission meetings. Extra time to the U.S.

- Two vessels, "COMOX POST" and "ATLIN POST" were christened in Victoria on the 25th. Great to see these new patrol boats.

August - Meeting with the Tswassen Indian Band re the foreshore dyke.

- Attended the christening of the "NORTH ROCK" in New Westminster on the 14th.

- To Masset on the 20th, then on to Rivers Inlet. It seems strange not to see a gillnetter in the Inlet.

- A great year for the sport fishery, however. My 23 pounder reduced the average weight of the sport catch.

- A briefing on the results of the Law of the Sea Conference on the 22nd and to Seattle on the 28th -- an informal meeting on the Canada/U.S. salmon problems.

September - There were five meetings of the Salmon Commission. The pinks always make it more difficult.

- A trip to the Stellako River on the 15th and then to the Nadina spawning channel on the 16th.

- We met the Chinese Fisheries delegation on the 19th.

- The Halibut Commission met on the 26th and an in-house herring meeting was held on the 30th.

October - A Sport Fish Advisory meeting at the Quinsam Hatchery on

October 3.

- The Regional Board met on the oceanographic vessel Parizeau on the 9th. We visited the three universities Biological Station at Bamfield.

- The dyking board met on the 16th - met with E.P.S. on the 28th and closed the month with an in-house meeting on Canada/U.S. salmon problems with Cliff Levelton.

November - The Annual Meeting of the I.N.P.F.C. was held the first week in November with Cliff Levelton as Chairman.

- An in-house salmon licence review meeting was held in Sechelt on the 13th.

- The Native Brotherhood Convention at Comox on the 20th and a meeting in Parksville of the Executive and Senior staff on the 27th to examine problems of integration with R & D organization and goals and priorities.

December - To Ottawa on the 1st. The Canadian Salmon Commissioners met with the Minister on the 2nd to discuss problems created by the ruling of Judge Boldt.

- The Regional Board met at the Airport on the 9th.

- The annual meeting of the Salmon Commission in Vancouver on December 12 and away we go again.

We said goodbye to a number of our staff: Walter Bytolan, Jack Ellis, Vic Giraud, C. W. Gladish, Gerry Hooser, Bob and Barbara Morgan, L. V. Morris, G. T. McIndoe, Helen McLean, Capt. R. D. McLellan, Arthur Reynolds, Sandy Service, Louise Spratley, Les Thacker, Boris Verbenkov, who have retired. We thank them for their years of service to Fisheries and wish them many happy years of retirement.

I would like to close by wishing all staff a Merry Christmas and a Happy New Year!

W. R. Hourston

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## ONCE UPON A TIME ... ENHANCEMENT

Enhancement is in! Resources are assured! (Some) Did you know that we had an enhancement program once in the past? It was called a hatchery program then, with hatcheries and sub-hatcheries all over the province. 105,689,080 eggs were reported collected in 1934, for instance. Introduction of Loch Leven trout to the Cowichan and Little Qualicum; 24 million sockeye eggs taken from the Birkenhead run; 3.7 million sockeye fry released in Babine Lake; 60,000 chinook fingerlings released from Rivers Inlet Hatchery; 141,000 steelhead fry and 420,000 coho eggs handled by Cultus Lake Hatchery; all in 1935 indicates the scope of the program. And then it came to an end on March 2, 1936. An excerpt from the Annual Report of the Deputy Minister tells the story.

Bern Hawley

## Spurious Emissions

Bob Brown has moved from his technician's position with N.B.C. & Yukon Division to Strait of Georgia Division.

\* \* \* \* \*

Keith Hebron, Fishery Officer for the west coast of the Queen Charlottes, leaves in December to join EPS.

\* \* \* \* \*

Obert Sweitzer leaves once again for the Yukon. He's replacing Garnet Jones as District Supervisor.

\* \* \* \* \*

Marlene Graham is leaving her secretarial post with West Vancouver Island Division to accept a position with the Department of Justice.

\* \* \* \* \*

Karen and Nev Venables (Economics Branch and Biological Station respectively) became the very proud parents of a baby, Robert Mark - 7 lbs. 2 oz., on November 13th.

\* \* \* \* \*

Jackie Goodwin has joined the Accounts staff as a clerk.

\* \* \* \* \*

Nancy Terpenning joined N.O.B. Economics Unit, replacing Sharon Evans.

\* \* \* \* \*

Dennis Brock, Fishery Officer in Whitehorse has won the Assistant Supervisor, District 3 competition.

\* \* \* \* \*

Linda Schuler has taken over the position of Licencing Administrator.

\* \* \* \* \*

It's December and retirement time again. Vic Giraud and George McIndoe from N.O.B. are leaving, as are a complement from the Marine Service: Capt. McLellan, Sandy Service and Walter Bytolan from the TANU; Leslie Morris from the HOWAY; and Wayne Gladish, District 2 Relief.

\* \* \* \* \*

Gus Gjaltema was the successful applicant for the Assistant Supervisor position in Kitimat.

\* \* \* \* \*

Jane Pinto has won the Fisheries Inspection Officer position on the Vancouver waterfront.

\* \* \* \* \*



## APPLYING FOR A JOB ?

The following is an interpretation of the Public Service Bulletin 75-20 and could affect your career planning.

The amendment applies to selection standards for all occupational groups in the Administrative and Foreign Service category (e.g. AS, PM) and the Scientific and Professional category (e.g. REM, ENG, BI):

To be considered for promotion within or to these categories an employee must have spent a minimum of one year in his/her current position or in a position classified in the same group and at the same level, provided that the position applied for has a maximum rate of pay that is higher than the maximum rate of the position he/she is currently occupying.

This amendment does not apply to technical, administrative support and operational categories.

Acting appointments are not affected by this amendment.

If you are considering a move and need more information on how this amendment could affect you, call Gary Norberg at 666-1624.

## GENERAL-LY SPEAKING

After nine months as Director-General and as we approach the end of 1975, I pause to consider what we have achieved in the past few months and what lies ahead. I have achieved rather less than I had, perhaps naively, hoped for. The new format for the regional organization is not in place at the time of writing although it should be by the time this issue of the Sounder is printed. There is every reason to expect that it will follow the general pattern I outlined to you earlier. Indeed, I am hopeful that many of the important secondary decisions on organization will be reached by Christmas so that we can get on with staffing our decentralized organization.

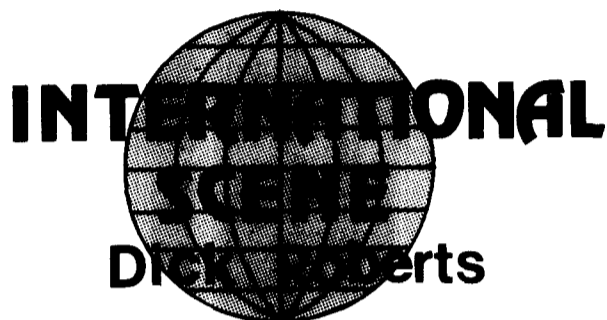
I have yet to meet many of you in spite of my intentions to get around the region quite extensively. However, I trust that you will appreciate that I have had a great many matters relatively new to me requiring attention. It has been an exciting and challenging, if sometimes frustrating, period. Hopefully I will be able to spend more time in the near future gaining a first hand appreciation of your problems and concerns.

I look forward with optimism to 1976. I have no doubt that we will be typically short of funds and staff. However, we

have some great opportunities in the Region which can be turned to our advantage particularly if we are all working in a concerted fashion towards our regional goals and priorities. I am encouraged by the first steps towards integration that I have seen and fully expect that we will all benefit from working more closely together.

With best wishes for a Merry Christmas and a Happy New Year to you and your families.

Glen Geen



## A TURNING POINT

It has been difficult for me to keep you up to date on events in the international arena in this column. One of the reasons for this has been the lag between the date of submitting my column and the time of publishing - as much as six weeks - and lately a lot has been happening in those intervals. Our editor has promised that the situation will improve next year.

For those not deeply involved in international fisheries matters, it may appear that not much has happened in 1975. No new Law of the Sea convention has been concluded. We have not extended fisheries jurisdiction. We have not solved our salmon problems with the Americans. However, I am convinced that a few years from now we will look back at 1975 as a turning point in our international fisheries relations:

- The Geneva session of the Law of the Sea conference produced an overwhelming consensus towards the right of coastal states being able to exercise jurisdiction over fisheries matters in a 200-mile economic zone.
- During the summer and early fall consultations and negotiations with the major fishing countries of the world produced agreement at ICNAF in Montreal that foreign fishing effort off the Atlantic coast of Canada be reduced 40%. Such agreement should provide the opportunity for our Atlantic coast stocks to rebound from their presently depleted state.
- During the summer and fall also we were very busy with bilateral negotiations leading to agreement by the Soviet Union, Poland (both of which fish off the Pacific coast), Spain, Portugal, and Norway to meet to negotiate agreements that would govern continued fishing by fleets from these countries in the event Canada extended fisheries jurisdiction.

An agreement has already been initialled with Norway and negotiations with Poland should be well underway by the time this issue of the Sounder rolls off the press. (At this time we will also be attempting to reach agreement on the conduct of Polish fisheries off the west coast). Similar negotiations with the Soviet Union are expected later this winter. The idea behind all these bilateral talks is that if Canada were to extend fisheries jurisdiction, discussions would have to be held with the countries most affected. With the east coast situation under control, we may as well start negotiating with these countries in anticipation of extending jurisdiction, whether this comes following the successful conclusion of the Law of the Sea conference or from action taken unilaterally by Canada.

As far as the salmon problem is concerned, we have not had negotiations since February, 1974. I am hopeful, however, that a renewed effort to reach agreement with the U.S. will be made early in 1976.

While all this activity has been taking place on the negotiating front, we have also started to make plans for the surveillance, enforcement and regulatory requirements associated with a 200-mile zone. More about this in future columns.

Making predictions is a hazardous pastime. On the international scene much depends on progress of the Law of the Sea conference and developments elsewhere. Whatever happens, particularly moving towards extended fisheries jurisdiction, will be based on the progress made in 1975.

# DON'T FORGET

## SOUNDER

### PHOTO CONTEST

Closing date: January 31, 1976

# THE Sounder

## Letters to the Editor

Editor,

Further to the "Firearms Issue," published in the September-October issue, I offer the following in favour of the "against" motion.

The demands for greater security and protection of our Officers has been a result of the growing challenge to authority by the public and the type of patrols engaged in to stop the illegal fisheries we are faced with. It has, without a doubt, become a very risky and expensive program to try to control the fishery in the Fraser River.

If we look at other problems such as the drug trade we find co-ordinated enforcement agencies are now concentrating on the big importers rather than the street corner pusher. Perhaps we should be looking at new tactics and going for the fish buyers rather than individual fishermen. Dogs combined with road blocks may be all we need to pinpoint vehicles carrying fish. We may never eliminate the problem but with support from our Public Relations Unit and a few "detrant" fines we could contain it.

In short, my views against firearms issue, combined with our present tactics, are that it would lead to an escalation of the problem rather than solution or containment. It would not enhance the present public image of the Fisheries Service and it would tend to develop a rigid way of thinking on enforcement matters.

I have never worked in the Fraser Valley and so my views are distorted by the relative simplicity of "northern" problems. If my suggestions for a change of tactics are all wet let's have a subscriber tell the Sounder why!

A. Gibson

Dear Editor:

I would like to take this opportunity to publicly thank Ken Jones, Gerry Hooser, George McIndoe and Jim Hrenyk for generously lending me some or all of their slide collections to duplicate for the central slide file.

Ken Jones, who has won prizes in both Sounder Photo Contests, provided excellent slides of the engineering and construction aspects of Fisheries projects throughout the province. These slides provide invaluable background information, and many have been used in slide presentations already.

Gerry Hooser had some very interesting slides on the old whaling station at Coal Harbour. His slides will help to fill a complete void in the file on the subject of whales.

George McIndoe lent me some slides of Fishery Officers on the job. There is a shortage of slides of people working, and most requests for slides or slide talks almost always include slides of people working.

Jim Hrenyk lent some slides on Indian fishing on the Yukon River. One of his slides is now under consideration for inclusion in the salmon enhancement book.

So the slide file grows -- slowly.

Again, thank you, gentlemen, for allowing me to have duplicates made of your slides.

Maxine Glover

Dear Editor:

A lot of words from another member of the lost legions (Fishery Officer staff). I would like first to emphasize as far as management, how far this Service has fallen. Like Hugh McNairn states about cut back of staff: this area (27) has received cut backs so badly in the last years that there is virtually no field coverage at all. At one time there were at least five (5) patrolmen, a full time patrol boat and one Fishery Officer. Now (this year) there is only two patrolmen for a total of 152 man days and one Fishery Officer. This means that except for periodic checking (7 weeks this year) by Headquarters cruisers there was no outside patrols during fishing season with little coverage by patrol staff. This means an uncontrolled fishery in an area that has the 2nd largest salmon catch over all on the West Coast of Vancouver Island even though most of the salmon are not local stocks.

But, what is all the complaining worth -- not a thing because middle management and upper management don't appear to give a damn about what is happening in the field and they appear (through inaction) to feel that all management of the resources we are responsible for, can be managed in that glass tower many miles from where IT is happening.

Now on with more complaints. We in the outlying positions are not being included in management meetings, i.e. herring, or in any of the educational courses which are being organized and it is my feeling that a list of courses should be sent to all staff so they may apply to take the course instead of a select few knowing and going to these courses. With the present system the select few will be more qualified for positions due to the additional training where the remaining officers lose out.

Next, what ever happened to the Director General's plans for a re-organization, for we, in the field, have not seen any change. The memo which Dr. Geen sent out to all staff had, in my opinion, some very good points: for I feel that there is a great need to get support staff in the field where they are available at a moment's notice and are more aware of what is going on. Instead of the present situation where, in some cases and areas, the Division Chief, Biologists and Engineers have not spent any time in many of their Division areas and therefore the question arises, how on God's earth, can proper management be arrived at when field staff's suggestions are ignored and management is being conducted from the Regional Office?

But one question always haunts me and that is, will re-organization disrupt the Service so badly that we will, for the first few years, become totally ineffective? For re-organization has been with us for the last five years and we have become a progressively poorer Service as far as coverage and our duties have increased.

Finally, at present there is no place field staff can advance past a District Supervisor, which, at present, is a position not being fully utilized by the Service. For the Supervisor has virtually no decision-making remaining or management to do because the Division Chiefs are now controlling all decisions and a field member can't get into a management position even though he may have more knowledge of field problems and people management in the field, BUT, as an old law states one type begets the same type: therefore, I can't envision anybody other than a Biologist or Engineer being upper or middle management for if you look closely, the positions from Director General to Division Chief are all biologists or engineers with few exceptions. So in conclusion, where can a field member go in the Regional Office when he has difficulties in management when there is no one who has experienced similar problems when they were field officers? BUT DOES ANYONE REALLY CARE?

Yours truly,

Brian A. Richman

The Editor,  
The Sounder.

Dear Ms Glover:

During the week October 9-15, I went on a trip that would only be called a "once-in-a-lifetime" for the following reasons:

1. For the first time, I not only crossed, but I recrossed Milbanke Sound.
2. I set eyes on a sea elephant.
3. I traversed the waters between Bella Bella and Prince Rupert where I have never been before.

4. I failed, miserably, in an attempt to beat the Glover Halibut Record.

As I enter what for me must be the Early Geriatric Age, I foresee little chance of repeating all or any of the noted actions.

The purpose of my tour was to visit the Indian fishermen at Bella Coola, Bella Bella, Klemtu, Hartley Bay and Kitkatla, there to chew over problems related to Income Tax, Wills, Salmon Vessel Licences, Steamship Inspection, Registration of Commercial Boats (changes in Canada Shipping Act forthcoming), Workers' Compensation and the Indian Fishermen's Assistance Program. That's a dazzling array of subjects, but don't be fooled -- I am not an expert on any of them; but I am concerned and I wanted to pass my concern along to the Indian fishermen.

This I managed to do at all points except Kitkatla where other things were going on.

About that sea elephant. My movie camera was on my bunk below deck. In my rush to get it, I collided with Mate Phil Lloyd who was in an equally great rush to see the mammal. By the time I got the camera, the ugly brute had vanished.

During the trip it was either overcast or raining most of the time. Regardless, I shot off 200 feet of film. Used up the last reel just before the sun came out when we were on the last leg to Prince Rupert.

For anyone suffering from the maladies normal to city life (tension, ulcers, general crabbiness, etc.), I can highly recommend a tour such as the one I had on the "KITIMAT II." I have had some pleasant trips in the last 25 years, but none could equal this one. For one thing, I felt that I was on a happy ship. Captain Brian Murray, Mate Phil Lloyd, Engineer Richard Deaton and Relief Cook Tom Coleman kept their various departments running smoothly. There was lots of comfort and plenty of good-natured kidding. A hearty "thanks" to all of these people and to Bob Mallory, Tom Moojalsky, and Gus Gjaltema who helped to make the tour pleasant and successful.

Now for the only complaint -- Milbanke Sound did not live up to its notorious reputation. I would expect something to be done about that -- for the benefit of future tourists.

John Robinson

Editor,

re: Fishery Officer Uniform  
Issue

This is a subject that has been discussed in your paper previously as well as by Officers at various meetings. What has come of it? Almost nothing. Where is our new insignia that was reported to have been designed over a year ago? Where are the new bush jackets that were supposedly being tried out?

We were supposed to have wash and wear permanent press slacks almost three years ago and to date we still have nothing. Who is it that designed our new issue of slacks, combining summer and winter into winter? Why is it that no input goes in from the people in the field? They are only the people who are supposedly to wear them. Maybe the Officers that I have contact with are the only ones not asked but I doubt it.

There is a new material out called polyester but it seems the Fisheries Service isn't aware of it. Certainly knit slacks will invariably have small pulls in them if you wore them in the bush but there are very few Officers that ever wear uniform slacks when walking streams or walking setting lines. For 95% of an Officer's work, a smart permanent press polyester slack would be much more advantageous from the care and appearance required. The present slacks crease much too quickly and are far too hot for the summer plus you have to dry-clean them.

Uniforms should be smart and easily cared for or else there is no purpose in wearing one.

Yours truly,

G. S. Zealand,  
Fishery Officer.

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In response to Gordie Zealand's letter to the editor on uniforms, I have a very brief comment. While the lack of any progress in improvement to uniform style and quality is annoying it is a piddling problem compared with the ineffective state of our Regulations Unit and the "acting" state of half the operations management staff in the Region.

A Regional Uniform Committee was formed in December, 1974 without any specific terms of reference. Its first task was to identify problems associated with uniform wear and issue. An updated policy concerning wearing of uniform was found to be the only action that could be taken regionally. Efforts to include items such as safety gear were thwarted by our Administration Service who could see no flexibility in the interpretation of the Treasury Board Policy Guidelines for the provision of clothing to government employees.

I hope that when the regional organization has had its winter tune up we will be able to concentrate some energy on this important subject. Rest assured

your desire for a smart, easily cared for field uniform is recognized in the Regional Uniform Committee which has to deal with Ottawa and the other Regions for the delegation of local purchasing authority or a national consensus on the type of uniform desired-unlikely in this vast country!

A. Gibson

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#### Guest Editorial

A proposal for decentralization has been put forward recently and Palmer and Todd have been asked to prepare an impact statement. This idea turns up every few years and seems to be fostered mainly by industry.

Within the memory of many people in the Fisheries Service, the Pacific Region was divided into three Districts with District Supervisors reporting to the Regional Director. These Supervisors were located in Prince Rupert, Nanaimo and New Westminster.

At that time there were more companies packing, more canneries operating and fishermen were far less mobile than they are today. It is interesting to note that that type of organization was disbanded when the industry was far less centralized than it is today. Now fishermen live in the south and travel to the north coast for the fishing season.

Industry, especially northern management, has been a major proponent of decentralization in the Fisheries Service while internally going in the opposite direction. Head offices are in the Vancouver area and some of the northern management lives in the south, going north for the salmon season. Although they support decentralization, in actual fact what they are asking for is high level decision-making capability in Prince Rupert where the canneries are located. They will not be satisfied with third or fourth level capability.

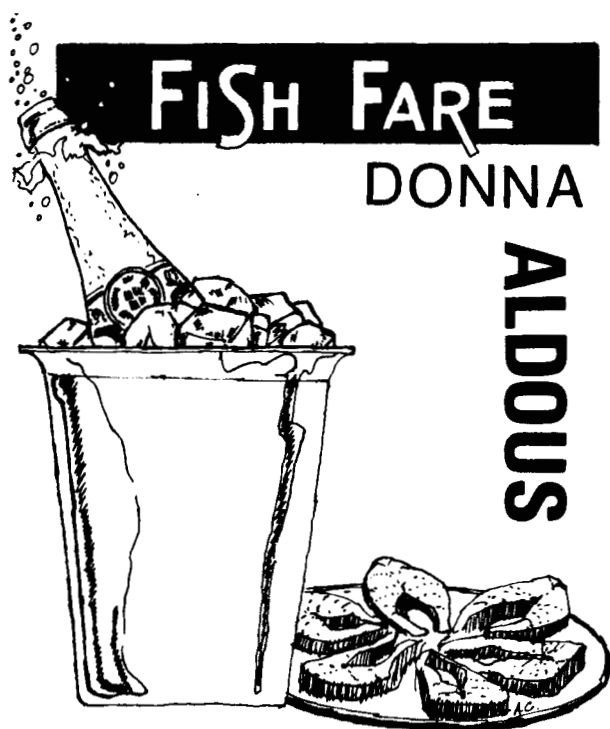
Prince Rupert is the northern centre of the fishing industry which is extremely active for 3 months of the year. Fisheries' business occupies 12 months of the year and for those remaining months, Prince Rupert looks very remote even from the area it is supposed to be serving and has few facilities. The Central Coast is as far removed from Prince Rupert as from Vancouver where a good portion of their fish are landed. If we are to locate with industry, then the Vancouver area is the only place in the south; if we are not going to locate with industry, then we should take a hard look at Prince Rupert in the north.

Costs of decentralization are many and varied and cannot all be expressed in dollars. Availability of office space would be a concern at some locations although not, as I understand, at Prince Rupert. Removal costs will be high and will include real estate fees, reducing budgets in the year of removal. A large part of the Service would be removed from

manufacturers and suppliers and communications would become a problem. Fish and Wildlife, for example, is finding that the Regions are establishing a level of autonomy that is making a unified provincial policy difficult to maintain. There would have to be duplication of services such as library, computer and laboratory facilities. Interchange of ideas among professionals becomes more difficult, as does access to technical facilities outside the local headquarters office.

Costs to the individual have to be considered too, as they affect morale and efficiency of performance. Those who move from this area have to sell houses and will probably have to live in apartments in locations like Prince Rupert where housing is at a premium. They may have to sell recreational property and accept a lower level of recreational opportunity; quality of education could be less and opportunity for shopping and entertainment greatly reduced. The cost of living is higher although housing might be less. If these factors don't directly affect job performance, they do affect turn-over rate in the jobs, which does affect performance in that learning time becomes a larger part of total job time.

Benefits resulting from decentralization as I see it, do not compensate for costs. I have not listed benefits here as I think they should be outlined by those promoting decentralization for the most favourable interpretation.



Christmas? How can it be Christmas? I'm still picking the turkey bones from Thanksgiving, and cooking the pumpkins from Hallowe'en!

Oh well, if the Yuletide season is really with us, we'll be ready for it, with some new ways to entertain the holiday hoards. In researching my recipes, I found the following, which should be made early in the festive season. Once you have this, you'll be ready for all the company, expected or unexpected, you can squeeze into your digs.

#### ADMIRAL RUSSELL'S PUNCH

4 hogsheads of brandy (a hogshead is 63 gallons)  
250 gallons Malaga wine  
20 gallons lime juice (bottled)  
2,500 lemons, sliced  
1,300 pounds white sugar  
5 pounds grated nutmeg  
8 hogsheads water

(Serves the North Atlantic Squadron or, nicely meets the needs of the Christmas Party for Fisheries and Marine Service)

For a private sitting, the above reads as:

2 quarts brandy  
2 quarts Malaga wine  
3/4 cup lime juice  
5 lemons  
2 1/4 pound sugar or 6 cups  
.1 oz. nutmeg (1 1/4 teaspoons)  
1 gallon water

Now that the liquid refreshments are taken care of, we can get down to the other real enjoyment of the holiday season, which (No Ian, not stuffed stockings!) . . . Food!

Appetizers and hors d'oeuvres, made of fish and seafood, are a perfect complement to heavy meals served traditionally at Christmas. Seafood canapes are light, and offer an exciting variety of flavours and textures.

For an appetizer that has real conversation-opening potential, serve your own home-pickled shrimps and salmon. It is surprisingly simple to prepare, and will keep, refrigerated, up to one week. Since these are prepared in advance, and marinated, they are ideal when you are busily involved in other activities. I tested four recipes for pickled shrimps and these were the real winners:

#### (1) Pickled Shrimps

3 pounds green shrimps (small or medium), shelled or unshelled  
Brine: 1 gallon water  
1/2 cup table salt (dairy fine or "3/4" ground)  
1 pint distilled vinegar  
1 tablespoon red peppers  
1 tablespoon white pepper-corns  
1/2 tablespoon whole cloves  
1/2 tablespoon whole all-spice  
1/2 tablespoon mustard seeds  
6 bay leaves

Simmer these above ingredients together slowly, 1/2 hour. Bring to a boil. Add 3 pounds shrimps, return to the boil and cook 5 minutes; remove from brine and let cool. Pack in sterilized jars, with a slice of lemon and a few fresh spices. Fill with a solution of:

2 pints of water  
1 pint 6% acid white distilled vinegar  
1 tablespoon sugar

Seal jars tightly, keep in cool, dark place. (Will keep up to 10 days).

#### (2) Gravlax

1 whole salmon, about 6 or 7 pounds

(halved lengthwise)  
 2 bunches of fresh dill (or dill seed)  
 1/2 cup coarse salt (or pickling salt)  
 1/2 cup sugar  
 4 tablespoons peppercorns, white (crushed)

Defrost fish. Place half of fish, skin side down, in a glass, enamel or stainless steel baking dish. Chop dill and place it over fish. Combine sugar, salt and crushed peppercorns in a separate bowl. Spread this mixture over dill. Top with other half of fish, skin side up. Cover with aluminum foil, and on it set a heavy platter or a board larger than the salmon. Pile the platter or board with several cans of food - they act as weights. Refrigerate 3 days.

Turn fish every 12 hours, basting with liquid marinade that accumulates and separating the halves a little to baste the salmon inside. Replace the platters and weights each time. When the gravlax is fully marinated, remove fish from liquid, scrape away dill and seasonings and pat dry. Place separated halves, skin side down, on a carving board and slice the salmon halves thinly on the diagonal, removing the skin as best you can. Serves 10 to 12 people.

Note: Be sure to hold the pickled products at 40°F. or less, for no longer than one week.

Use convenience foods to assist you in preparing party foods. If the refrigerated crescent rolls called for in the next recipe are not available, substitute a roll mix, and roll it to 1/4 inch thickness before preparing the fillings.

#### CRESCENT HORS D'OEUVRES

##### (A) Salmon Filling

1 can (7 3/4 oz.) salmon  
 1 tablespoon butter  
 1 teaspoon chopped onion  
 1/4 pound fresh mushrooms  
 1 hard cooked egg, chopped fine  
 1 tablespoon soy sauce  
 1 tablespoon prepared mustard  
 1 teaspoon chopped fresh parsley,  
 or 1/2 teaspoon dried parsley flakes

Saute the onions and mushrooms lightly in the butter, until tender. Mix with remaining ingredients, and chill.

\* 2 packages refrigerated crescent rolls  
 1 egg, mixed with 1 tablespoon water

Heat oven to 375°F. Lightly grease 2 cookie sheets. Spread roll dough on floured cutting board. Roll thinly and cut crescents in half, to maintain a triangular shape, or roll out the mixed dough, and cut into small triangles. Fill the rolls with 1-2 tablespoons of filling, fold over and pinch ends to seal; brush with beaten egg. Bake 15 minutes. Makes 32.

##### (B) Sardine Filling

2 cans (4 3/8 oz.) boneless sardines, drained  
 1/3 cup catsup  
 2 tablespoons prepared mustard  
 1/3 cup relish  
 1 tablespoon chopped parsley  
 1 egg

In a bowl, combine all ingredients well, and mix with a fork.

Don't overlook the low-cost fish products available, since many of these are full of flavour, and can help ease the strains on your finances at a time when you need all the help you can find. The following will be a popular item on your canape tray.

Party dips are still popular, but some of the old favourites are a little time-worn.. Perk up your cocktail table with a few new ones; these seafood dips are tantalizingly different. Try serving the dip in a large clam shell, set in a bed of greens.

##### 1) Caviar Dip

1 jar (2 ounces) red caviar, or black  
 2 tablespoons minced chives or green onion tops  
 1/2 pint dairy sour cream

Gently fold caviar and chives into the sour cream. Makes 1 1/2 cups.

##### 2) Smoked Oyster Dip

1 can (2 1/2 ounces) smoked oysters  
 2 teaspoons lemon juice  
 3 drops hot pepper sauce  
 few grains pepper  
 2 packages (4 ounces each) chive cream cheese  
 2 tablespoons mayonnaise  
 2 to 3 tablespoons light cream or milk

Drain oysters and chop very finely. Sprinkle with lemon juice, hot pepper sauce and pepper. Cream the cheese. Blend in mayonnaise, milk and oyster mixture. Beat until fluffy. Makes 1 1/4 cups.

An easy way to prepare appetizers for a large crowd is to let the guests make their own. Select a variety of party crackers, but keep the flavours of the crackers less noticeable than the flavour of the spread. Prepare a molded party spread, and let the munchers do the rest.

#### PACIFIC BOUILLABAISE

Fat: 1/2 cup olive oil  
 2 tablespoons butter

Vegetables: 2 leeks, cut julienne style (long, thin strips)  
 2 medium onions, slivered  
 1/2 cup carrots, cut julienne style  
 3 cloves garlic, mashed  
 2 cups canned or fresh tomatoes, peeled and chopped

Herbs & Seasonings: 1 large bay leaf  
 1 teaspoon dried saffron

1/2 teaspoon thyme  
 1/2 teaspoon  
     tarragon  
 1 tablespoon chopped  
     parsley  
 1 teaspoon salt  
 1/2 teaspoon white  
     pepper  
 1 dried orange peel  
     - 4 inch strip

Liquid: 1 quart fish stock (or bottled  
           clam juice); or 2 chicken  
           bouillon cubes dissolved  
           in 1 quart hot water  
           2 cups dry white wine (or 1/2  
           cup lemon juice)

Fish: 3 pounds fish: 1 pound each of  
           any 3 varieties, such as bass,  
           salmon, cod, halibut, flounder  
           or sole -- cut in slices  
           3 dozen live clams or mussels,  
           scrubbed well  
           2 pounds whole green prawns

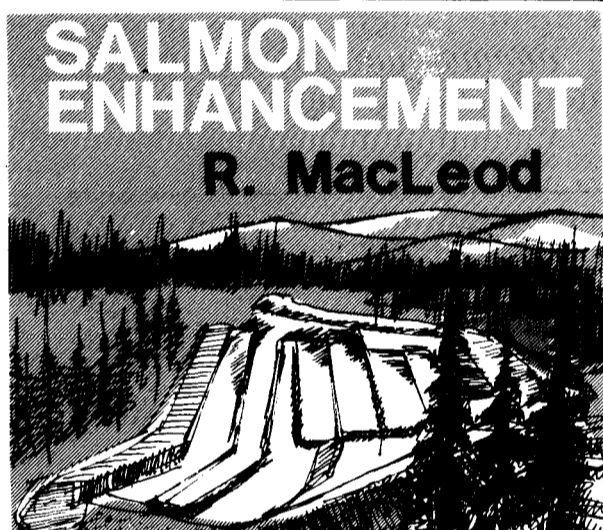
Method: Prepare all ingredients and  
           assemble before beginning to  
           cook. Gently heat oil and butter  
           in large kettle. Add leeks,

onion, carrot and garlic. Saute  
 until golden, about 5 minutes.  
 Add thyme, tarragon, orange peel,  
 parsley, tomatoes, bay leaf and  
 saffron, stirring well. Add  
 stock and wine. Season with  
 salt and pepper. Bring to a  
 boil. Add sliced fish (bass,  
 cod, etc.); return to the boil.  
 Reduce heat and simmer 5 min-  
 utes. Add clams and prawns,  
 cover and cook gently until  
 prawns turn pink and clam shells  
 open. Adjust seasoning and  
 serve. Serves 6.

N.B. If desired, warm 3 tablespoons  
 butter in sauteuse, add prawns and  
 saute until red. Add 2 - 3  
 tablespoons brandy and flame.  
 Add to soup.

There you have it for 1975, but  
 another year of good eating is coming.  
 May all of you have a very joyous  
 Christmas, and a 'specially happy year  
 in '76!

"The Happy Cooker"



On November 4th, 1975 our Minister,  
 the Honourable Romeo LeBlanc and the  
 Minister of Recreation and Conservation  
 (B. C.), the Honourable Jack Radford,  
 signed a Memorandum of Understanding  
 covering planning for a comprehensive  
 salmonid enhancement program.

What is the particular significance  
 of this event?

First, the signing confirmed that  
 the enhancement program will be developed  
 by the two governments in a co-operative  
 way. The Memorandum, in short, reflects  
 a formal recognition in that it is  
 desirable and mutually beneficial that  
 the two governments work together to  
 design the program, e.g. to collaborate  
 in planning and undertaking studies.

Secondly, the Memorandum will set  
 in motion the process for developing a  
 suitable federal-provincial arrangement  
 covering implementation of the (approved)  
 program. The intent is to incorporate  
 in a document the respective commitments  
 and responsibilities of the two govern-  
 ments.

And thirdly, the Memorandum estab-  
 lishes a Steering Group to direct the  
 necessary planning and programming  
 required to achieve the foregoing tasks.

Members of this Group will be the  
 Director-General, Dr. Geen, the  
 Associate Deputy Minister (Fisheries,  
 B. C.), Mr. E. Vernon, and other members  
 yet to be named.

The Steering Group will convene its  
 first meeting on December 17th. This  
 meeting will be formative in character:  
 situation report for the members, formu-  
 lation of organizational-administrative  
 arrangements and, the development of an  
 agenda for the first meeting of substance  
 (probably mid-January). In the meantime,  
 planning activities will continue under  
 the direction of the interim Technical  
 Co-ordinating Committee which, by the  
 way, will become the Task Force (manned  
 by many of the same actors who have been  
 a part of the process since August, 1975  
 but, operating under the third or fourth  
 change of name). By the next edition of  
 this paper, organizational-administrative  
 arrangements will have been more clearly  
 specified and I will endeavour at that  
 time to spell these out in greater detail.

In the meantime, Merry Christmas  
 and Happy New Year to all.

Ron MacLeod

## THE Sounder

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 necessarily reflect Fisheries  
 Service policy.

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