

July, 1972

N.O.B. NEWS

YUKON TERRITORY EGG AND FRY PLANTING

Trout planting in the Yukon Territory was first carried out by the Whitehorse Fish and Game Association in the late 1940's. The purpose of planting was to provide angling for a preferred species easily accessible to Whitehorse residents.

The Federal Department of Fisheries accepted responsibility for Yukon trout planting in 1958, and has been responsible for planting 1.583 million Rainbow Trout eggs and 40,000 Rainbow Trout fry up to 1971. As in the past, the object of the program was to provide angling near to population centres.

The first attempts utilized various techniques of incubating eyed eggs. Incubation trays and simulated gravel redds proved unsuccessful but streamside and upwelling incubation boxes showed signs of promise if an adequate water supply was used. In 1970, in an attempt to improve on planting success, 30,000 two- to two-and-one-half-inch Rainbow Trout were purchased from Steelhead Creek Trout Co. in Mission, B.C., and trucked 1,700 miles to the Yukon. Overall survival was 88%, much higher than experienced before.

Growth rate was checked in one of these lakes some 54 weeks after planting and the stock had increased from 2 - 2½ inches to 13 - 14 inches and from approximately .08 ounce to 23.9 ounces. The largest Rainbow Trout caught from stocked lakes was 20 pounds in Long Lake near Whitehorse.

In 1972, emphasis shifted from trout planting for angling purposes to commercial pothole farming. Encouraged by the results of prairie pothole farming, it was felt that our lakes had tremendous potential for producing a highly marketable fish.

Arrangements were again made with Steelhead Creek Trout Co. to transport 3,000 7-inch Rainbow Trout and 10,000 4 - 5-inch Coho Salmon to the Yukon for planting in four lakes.

All four lakes were from 5 to 30 feet deep, were less than 10 acres, had a large quantity of freshwater shrimp (gammarus) and were naturally barren of fish. It is expected that these lakes will produce marketable size fish in almost four months and that fish remaining uncaught at freeze-up will winter-kill prior to another planting.

Travel time for these fish was 35 hours in four freezer-type tanks. Planting began at 9:00 PM June 8, and was completed by 6:00 AM June 9. The almost total absence of darkness at this time of year aided greatly in transporting these fish from tank to lake in the shortest possible time. Both trout and salmon adapted quickly to their new surroundings and were dispersed around the lake within a very short time. Seagulls proved to be an unexpected predator and could be the biggest hazard to this whole project as they were scooping up the stock a week after planting.

continued on p. 2...

MANAGER'S REPORT

Like everyone else, the early publication of the NOB News has caught me with my news down.

Nothing eventful has transpired since the last issue. No significant change of plans has occurred.

Fishing along the north and central coasts has generally been good, with some unexpected weak spots. The light return of sockeye on the Skeena to date has been particularly disappointing and is now causing some concern, in a conservation sense. Pink salmon have been showing up in their usual erratic way - very good in one area (Butedale), unexpectedly light in another (Fisher-Fitzhugh). The general projection, however, is still for above average catches. In contrast to the West Coast of Vancouver Island and the Strait of Georgia, coho catches have been fair to good, particularly in the inshore net fisheries.

Speaking of fishing, I was at a meeting a while back with the Fishing Vessel Owners Association. At the conclusion of the meeting, my counterpart in the South, Dick Crouter, invited members of the Association to visit a number of fish facilities on Vancouver Island, North Vancouver and the Fraser Valley this fall. I was somewhat embarrassed that except for the Babine Project I could not duplicate the very impressive list of facilities rhymed off by Dick. I was embarrassed, that is, until it came to me that while we do not have too many fish facilities, we do have a lot of fish. I notice that the Vessel Owners are now all out fishing along the north coast earning the money needed to pay the cost of visiting the very impressive fish facilities in the South.

I note that George McIndoe, Chief of the Regulations Unit, has almost completed a first draft of a reorganization of the B.C. Fishery Regulations. From here it looks good. The next stage is an editing job by a panel of in-house experts. I look forward to the day I'll be able to browse through the Regulations and be able to find what I'm looking for.

R. MacLeod.

EGG PLANTING continued from page 1

A very large mortality occurred to both trout and coho while in transit. An estimated 50% of the coho and 20% of the trout did not survive the trip. Mortality after introduction to the lakes appeared very low. If the growth of the fish is encouraging enough to warrant further experimentation then a hard look will be taken at methods of transport.

Periodic checks will be made throughout the summer to observe growth rate and stomach contents. Just prior to freeze-up each lake will be netted and trapped intensively. The fish will be marketed locally in a fresh condition and, if recovery is large enough, some might be exported to a market in the south.

O. Sweitzer.

CHALLENGE

You may have noticed that the N.O.B. NEWS masthead is something less than spectacular. Can you improve on it? Send your design in. We will use each drawing at least once, and then we may choose the best one as our "permanent" masthead.

Editor

DOCEE RIVER COUNTING FENCE

Background:

The Technical Support Unit designed and constructed a permanent fish counting fence on the Docee River in Smiths Inlet. Construction commenced in January of this year as a winter works project and succeeded in meeting a completion deadline prior to this year's sockeye run. The fence is presently in operation and on July 12 and 13 passed 5,000 and 10,000 sockeye respectively.

Purpose:

The purpose for installing a counting fence in the Docee River is to aid in the management of the Smith's Inlet sockeye run. By achieving an accurate count of migrants an optimum return can be managed for and consequently commercial fishing of the remaining stock can be maximized. Previous attempts at obtaining an accurate count were plagued with high water, turbidity and bad weather. With the present facilities an accurate count is now obtainable regardless of these conditions.

Cost:

Total cost of this project was \$170,000, including labour, materials, transportation, accomadation, administration, and all other incurred expenses. It is interesting to note that in 1968 the sockeye escapement to Docee River was estimated as high as 200,000. Had such a facility been present then, 100,000 of these fish might have been made available to commercial fisheries. At a unit price of \$3.00 per fish, the fence would have paid for itself within the one year alone.

1972 Escapement:

The planned escapement for this year's run is between 70,000 and 100,000 fish. As the count at the Docee River becomes significant appropriate boundary changes will be made in Smiths Inlet in order to regulate the commercial fishing effort as required.

Engineering:

The T.S.U. undertook the entire design and construction of the project, utilizing its own permanent staff and supplemented with casuals on forced account. It is hoped that undertakings of this sort will develop the required expertise for the newly formed T.S.U. For purposes of information a complete photographic record has been kept. Coloured still photographs are available to anyone for inspection by contacting W. Peterson. A movie showing the entire project will be available for viewing in the near future.

W. Peterson.



Initial lowering of frames for alignment with river bottom.

June 17/72

D.C.O. GIRAUD HONORED

In an impressive and moving ceremony, one of our senior District Conservation Officers was honored for his achievement of excellence and display of leadership on endeavours above and beyond the call of duty (or overtime). At a formal ceremony at the Prince Rupert Gun Club Board Room, North Coastal Division Chief Rodney Palmer awarded District Conservation Officer Victor Giraud with the "Robe of Merit"* in honor of his appointment as the Grand Hunter, Superior Skulker and Wizard Strategist of the Order of Flamingos and Other Exotic Birds (G.H.S.S.W.S.). The award was for his leadership in the midnight foray in search of honor for his troops. He suffered great misery, physical pain and mental anguish the next day for his actions, but he claims he would do it all again if the situation presented itself.

N.O.B. News sends its congratulations to Mr. Giraud (G.H.S.S.W.S.).

Social Editor

*This sensual garment was recently described by Therrien McThlugg in the May issue of "Men's Wear Daily", the distinguished publication devoted to the executive gentlemen's couture. He stated and we quote, "I find it difficult to ascertain the affect this vêtement will have on our culture. Its decorative design is so suggestive that one must find oneself in awe of the very fibre of its manifestations." We can only conclude that Mr. Mc. was unwilling to make a specific evaluation (M.B.O.) of the costume which will, undoubtedly, leave its fecal marks on the annals of haute couture, or some other location. The garment to which we refer is noted for its white simplicity, devoid of decoration except for a fuschia flamingo in full fanciful feather rampant on this standard Stanfield.

DID IT EVER strike you funny that while environmental experts say we have to get rid of the automobile or the space chokes to death, thousands of people pay millions of dollars to make faster cars and millions more pay to see them zoom around a track?

Nothing against the sport, mind you, but one has to have to say about horses. At least they exhaust themselves.

Effect of Chemicals in Water

Communication through chemicals may explain a fish's ability to locate its home stream after migration. Researchers at Woods Hole Oceanographic Institution, studying the sensitivity of fish to chemicals in the water, claim that this sensitivity in fish is comparable to the sense of smell in land animals.

Using alewives, the researchers found that test fish always could select their home stream from other streams placed alongside it in a Y maze. In this experiment, water from the home stream was placed into one arm of the Y and water from the adjacent stream into the other. Even when the chemical differences were slight, the alewives could distinguish their home stream each time.

In another study, the Woods Hole group examined the effect of placing kerosene-soaked asbestos strips in a lobster tank. The kerosene disrupted the normal behavior pattern by increasing stress reactions, grooming activity, and aggression. In addition, the lobsters ate the asbestos strips, indicating that aquatic animals living near oil pollution may become contaminated and unfit as a source of human food.

AMERICAN FISHERIES SOCIETY

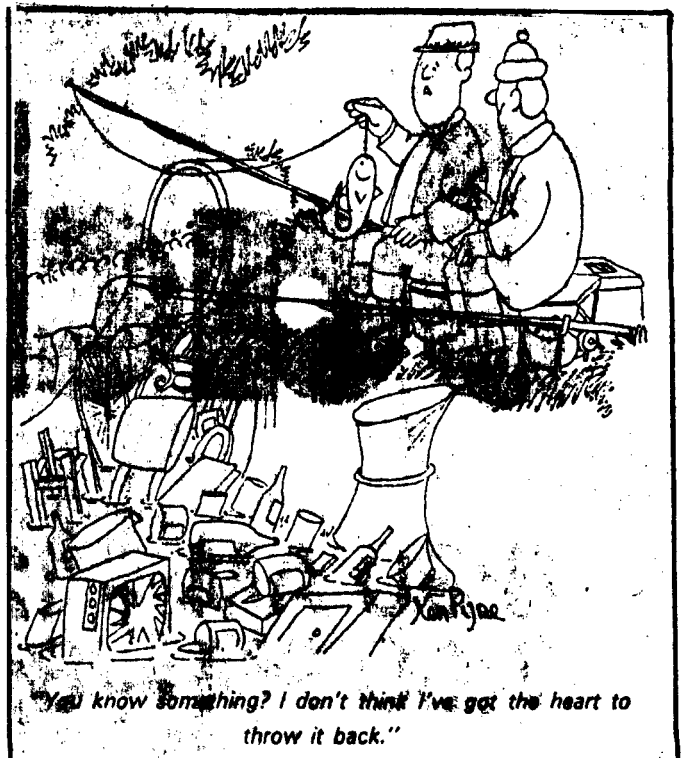
MAY - JUNE 1972

INVESTMENT OPPORTUNITIES

The Northern Aquatic Living Resources stock is on an upswing, due in part to the current heavy demand for its product. This demand is expected to continue well into the fall, with the Rivers Inlet and Nass-Skeena warehouses bracing themselves for the heaviest pressure. Company vice-presidents are currently gauging the effects of market manipulation and new stock options.

It is rumoured that the Nass-Skeena stock will split sometime in July, allowing investors to purchase one or the other at optimum share prices.

M. Haugen.



"You know something? I don't think I've got the heart to throw it back."

VANCOUVER SUN JULY 10, 1972

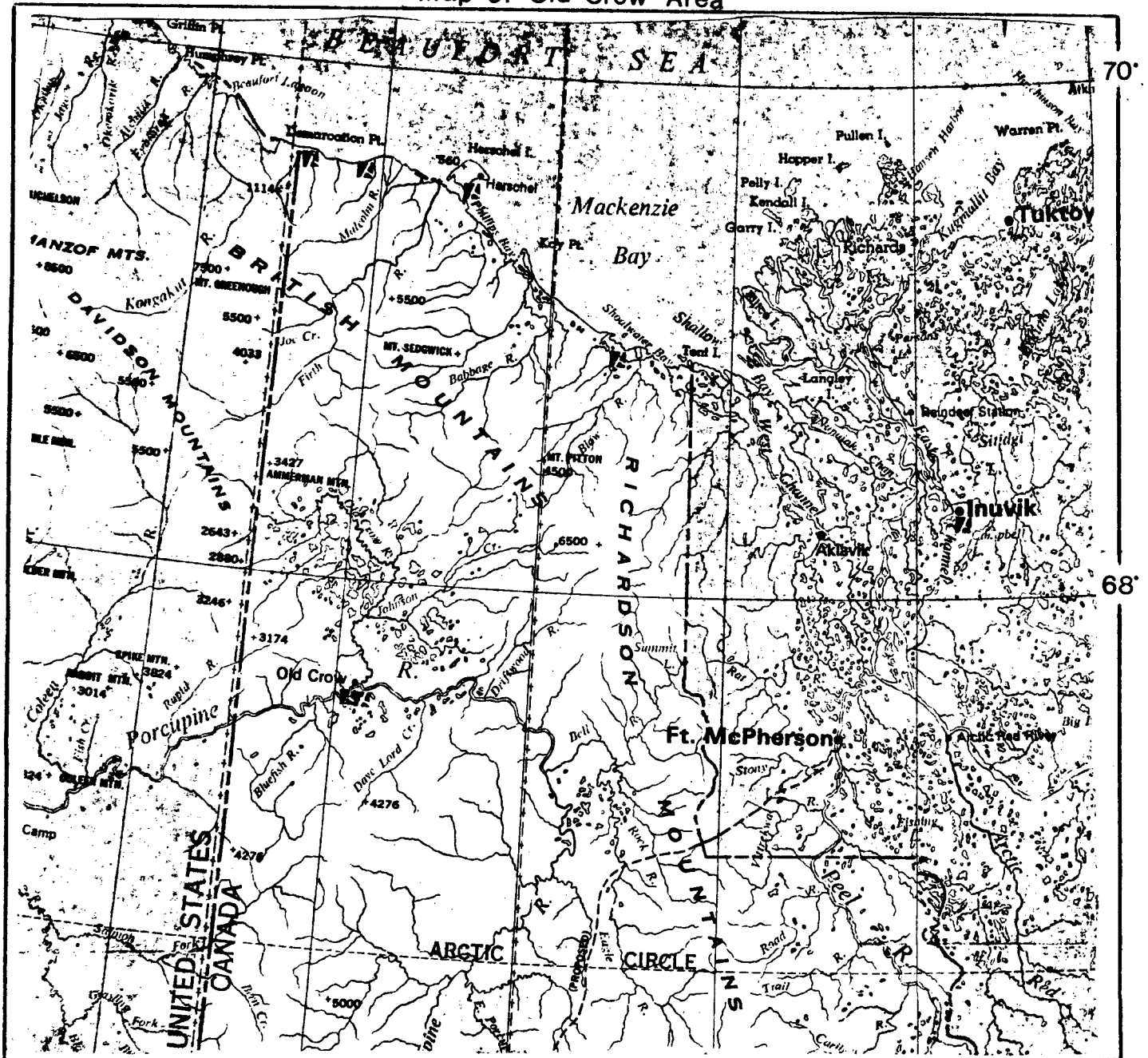
FIELD STUDIES AT OLD CROW

Old Crow, the most northerly settlement in the Yukon, is the field headquarters for the Yukon Pipeline Survey. Old Crow has a population of approximately 250 people (3% white), and although it has a store, post office and an airport, it is still very isolated.

The objective of the pipeline study is to "protect the capacity for fish production in aquatic environments influenced by pipelines."

The pipeline group has been in Old Crow since early May, fabricating a lab, warehouse, living quarters and preparing sampling gear.

Map of Old Crow Area



I arrived in Old Crow just after break-up, which occurred between the middle and the end of May. The main objective during the month of June was to locate the spawning grounds for as many species as possible, and in particular those of the Arctic grayling. The turbid water increased the difficulty of this task. Migrating salmon fry and movements of other fish were also observed.

In early June, the first major field trip was initiated. Three men spent one week working their way up the Porcupine River, having the Fishing Branch River, 150 miles upstream, as their goal. The Dave Lord, Driftwood and Bell Rivers would be sampled along the way. The sixteen foot Smokercraft, powered by two 20 horsepower outboards was heavily loaded, and the canoe in tow slowed the men down even more. The Porcupine River was high, muddy, and cluttered

continued on p. 6..

OLD CROW (continued)

with debris and some ice. Progress was slow against the eight mile per hour current. After six days they returned, having travelled only as far as the Bell River, some 50 miles upstream. The trip was considered successful and no mishaps occurred. No communication is maintained with field camps, a practise which I consider dangerous, although I can offer no alternative.

My first trip away from Old Crow was to the Bluefish River, a tributary of the Porcupine River, approximately twenty-five miles downstream. Gillnets and beach seines were used for fish sampling, and water samples and discharge were taken. This cycle will be repeated every two weeks until the end of August.

The main work area is within a six mile radius of Old Crow. As soon as the Porcupine River started dropping and the debris decreases, gill net stations were selected. The three stations, upstream and downstream Porcupine and Old Crow River are sampled weekly with a minimum of three monofilament nets of two, three, and four inch mesh. Although the monofilament nets are harder to handle, to clean, and not as strong as the other types, they appear to be more effective. Smaller fish are captured by seining. Since so little is known about the fish in this area, an extensive sampling program is being conducted. Long tedious hours are spent in the lab sampling--at times there may be over 2,000 fish to process. Species, length, weight, sex, maturity, scales and stomach contents are taken from most fish. Seining is also being used around Old Crow to capture fish for tagging and marking for movement and population studies. Alaska Fyke nets are also being used to obtain information about fish movement.

The rivers were considered safe for float plane operation and most of the lakes were open by mid-June. Our working area was now expanded to include the rivers draining into the Beaufort Sea (Arctic Ocean) and the headwaters of the Old Crow and Porcupine Rivers. During this period, the mosquito population rapidly increases, and it was sure suicide to venture outside without a can of "OFF".

Towards the end of June, a lake survey commenced. The lakes are numerous and many are nameless. It appears to me that the rivers at one time may have flowed through a number of them. The lake survey will consist mainly of gill net sampling and some seining where possible.

This marks the half-way point of the field season around Old Crow, and the end of my work in the Northern Yukon--a very interesting and enjoyable experience.

(Other groups involved with the pipeline study are the Fisheries Research Board from Winnipeg, studying insect life and water chemistry; the Fish and Wildlife Branch, studying mainly cariboo and muskrat, and Williams Brothers and Renewable Resources, two consulting firms doing research for the gas companies..)

J. Van Tine

Editor's Note: Jim Van Tine is a technician for the Southern Operations Branch. He was "loaned" to the N.O.B. for his expertise in beach seining and gillnetting. (Who says the N.O.B. and S.O.B. don't cooperate?)

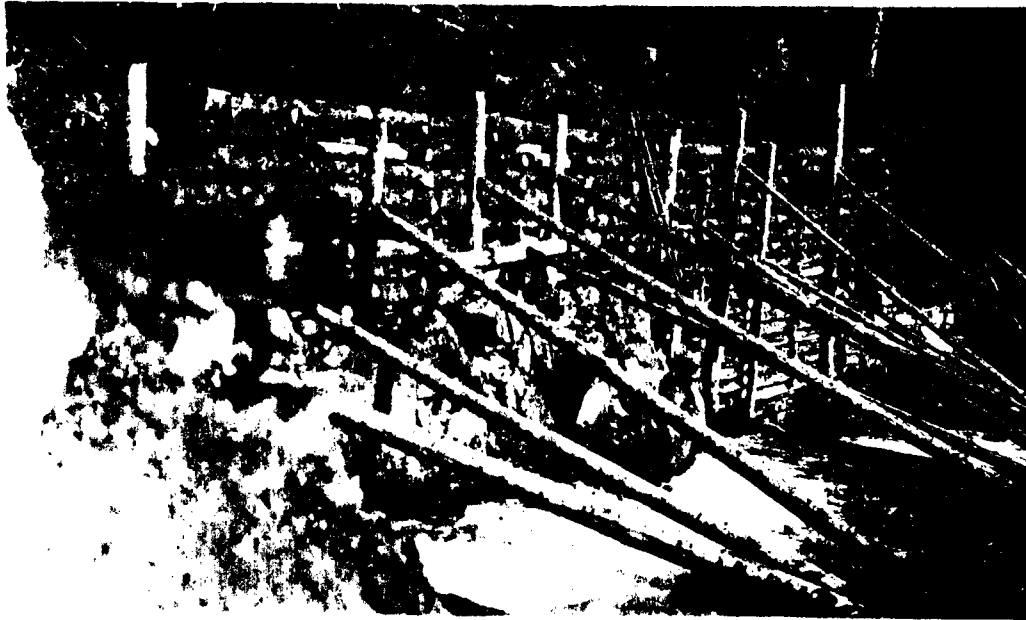
HELP WANTED

Executive manager for Northern Aquatic Living Resources Corporation. The applicant must have full knowledge of the product and production, in order to manipulate the stock for the maximum benefit of the shareholders. He must be able to effectively co-ordinate the three production divisions of the N.A.R.L., as well as manage a force of protection officers for the guardianship of the warehouses.

M. Haugen.

MEZIADIN FISHWAY

THEN (SEPTEMBER, 1918)



NOW



Nass River bridge

Resources Minister Ray Williston, will officially open the new Nass River Bridge Saturday, July 8.

The brief ceremony will begin at 11:30 a.m. at the bridge site some 125 miles north of Terrace above Meziadin Lake.

Invitations have been extended to elected representatives in the Skeena-Bulkley Valley-Stewart area as well as representatives of Chambers of Commerce and service clubs.

The bridge, completed by Forest Service crews late in 1971, was constructed primarily to provide access into undeveloped areas for forest protection and management. As an added bonus this bridge forms the vital link joining the Stewart-Cassiar Highway with the Yellowhead 16 Highway.

Although the bridge will be open to the public, travellers are cautioned that access is limited to non-operating hours and weekends. Travel at any other time is dangerous and should not be considered.

Anyone wishing to attend the ceremony is welcome. Travel involves an industrial road through Columbia Cellulose Tree Farm Licence and food and vehicle services are limited.

Information pamphlets about road use and facilities are available from Col-Cel offices, tourist information booths and garages in the area.

PRINCE RUPERT
DAILY NEWS
JUNE 26, 1972

RESOURCE CORPORATION MONOPOLY?

General Aquatic Living Resources Corporation (G.A.L.R) recently announced the formation of a new wholly owned subsidiary, Northern Aquatic Living Resources (1971) Ltd., under the direction of a management team headed by J.R. Loedcam. N.A.L.R. is now the only manufacturer of living aquatic resources in the north since it assumed control of the G.A.L.R. factories distributed throughout this area. These factories produce all essential components of the products.

G.A.L.R. originally controlled the distribution of its products but found that its techniques imposed excess demands on the factories over which it had little control under the previous management structure. As the previous management became more remote from the shareholders, N.A.L.R. was formed to improve the efficiency of the production line and to protect the interests of the stockholders. Also under previous management factory maintenance suffered due to concern over distribution. As G.A.L.R. gained management control over the factories, over-concern with the factories resulted in corporate objectives being ignored or forgotten. The recent corporate structure changes were designed to keep a better prospective on corporate goals.

N.A.L.R. has been organized into three production divisions concerned with the north coast of B.C., the Queen Charlotte Is., the central coast of B.C., the Yukon and the remainder of northern B.C. Under the new corporate structure, Environmental Quality Inc., the subsidiary company under control of N.A.L.R. has been retained as factory maintenance consultants and interface with the Environmental Protection Service (EPS) of the Canada Dept. of the Environment who are concerned with plant inspection. E.Q.I. controls the day-to-day maintenance and preventative maintenance programs and is responsible for assuring a reasonable supply of quality raw materials to the factories. G.A.L.R. had been the exclusive user of raw materials but recently other industries have begun competing for these resources and have caused a decrease in G.A.L.R. factory production. Technical Service Inc., another subsidiary of N.A.L.R., has been retained to increase production line efficiency and to increase knowledge and control of the manufacturing processes.

An Inspection Branch of G.A.L.R. monitors and regulates quality of product processing in the commercial section. With the new management's greater concern about customers it seems probable that the Inspection Branch will re-orient or widen its inspection duties to protect the final consumer rather than industrial consumer only.

The product line, mostly Pacific salmon was mainly for commercial use. Lately, Industrial Development Services, a subsidiary of G.A.L.R. has promoted a new diversified product line by incentives in the commercial sector.

G.A.L.R. distributed their products through a number of centralized warehouses and as product diversification developed, more and more small warehouses were utilized. Recently, the individual consumer discovered that he could acquire the product directly from the warehouses himself and as this had a recreational value the recreation soon had more value than the product, especially in the uncrowded warehouses of scenic rural areas. The more crowded easily accessible warehouses generally carry a cheaper line of products but due to high volume the total value of business at these warehouses is large and the potential is fantastic.

(News Service Release)

'TERMINAL MAN' BY MICHAEL CRICHTON

PUBLISHED BY KNOPF BOOKS

'DIMENSION OF MIRACLES' BY ROBERT SHECKLEY

PUBLISHED BY MAYFLOWER BOOKS

For those of you who are tired of stereotyped science fiction, two interesting books were published and are alike only in the fact that neither has rocket ships, androids, or the other well-used plays generally associated with science fiction.

In the first of these, the action takes place right here on earth in the year 1971 and is futuristic only because some of the techniques used by the characters in the book have not actually been used in real life. (I don't think). The title is **TERMINAL MAN**, by Michael Crichton, and like his earlier book, **ANDROMEDA STRAIN**, leaves you wondering where truth leaves off and fiction actually begins. The story is of a computer programmer who has spells of violence brought on by a condition of psych-motor epilepsy resulting from an accident. The staff of a university hospital attempt to cure or at least stop his attacks (against the advice of his psychiatrist) by installing in his head a small computer to stimulate the pleasure centers of his brain when it senses an impending seizure. The installation represents a borderline case of mind control and the results point out the need to consider all the possible consequences before attempting new techniques, even for the advancement of science.

The second book, **DIMENSION OF MIRACLES** by Robert Sheckley, is a light satire of a man on earth who is suddenly and mistakenly awarded a prize in a galactic sweepstakes even though he had not bought a ticket and was not aware of other intelligent life in the galaxy. He is whisked away to Galactic Headquarters, is awarded his prize and attempts to get back to earth. Throughout the story the author comments on bureaucratic bungling, the "god-business", the construction of the earth, and draws several caricatures of our society while the hero is being chased through time and space by his own personal predator.

A fish died

because

it couldn't breathe

because

its gills got clogged with silt

because

mud ran into the river

because

there was nothing to trap the rain

because

there was a forest fire

because

someone was careless with fire.

So please, be careful with fire...

because

D. Harding

Use for Clam Shells

Broken clam shells make an excellent growing bed for young oysters, a fact demonstrated in a current project directed by Richard B. Howell, and sponsored by the Environmental Protection Agency and Delaware Division of Physical Health. The project may make it possible to expand oyster production on the East and Gulf Coasts, at the same time allowing disposal of some of the 112.5 million pounds of waste shells left over from harvesting and processing shellfish in the mid-Atlantic region.

Waste shells have generally been left in piles in the vicinity of shellfish processing plants and have always posed a problem in solid waste disposal. Dumped on the land, they produce offensive odors, are attractive to flies, and are difficult to bury and compact in a sanitary landfill. Dumped on oyster beds in the Upper Delaware Bay project area, however, they provide an attractive substrate upon which oyster spat readily settle. The quality of water where shells are deposited has been monitored, the findings indicating that scavenging eels and crabs clean the shucked shells within hours and prevent increased water pollution.

AMERICAN FISHERIES SOCIETY

MAY - JUNE 1972



BIRTHS

CONGRATULATIONS TO:

Ron Ginetz, a N.O.B. biologist, and his wife, Sharon, on the birth of their second son. Joshua Mark George was born on July 2, in Burnaby General Hospital, Burnaby. He weighed 8 pounds, 5 ounces.

OCTOPUS

For tender meat select a small octopus. The body has an outer layer called a mantle. This will give you a flat piece of tender meat that does not have to be pounded to tenderize it. Blanch both the mantle and arms quickly in boiling water for a few seconds. Then peel off the skin; the suckers will come off with the skin. Pound the meat (the arms) as you do abalone or beef. Cut into pieces several inches long. Simmer in your choice of seasoning until tender. It may be eaten without further preparation or if you prefer, cook it in various sauces or brown it under the broiler after brushing it with butter.

ABALONE

Moderate quantities of the Pinto Abalone are found by skin divers in the Haro Strait area. The full grown abalone are 4 to 5 inches, much smaller than the species of abalone used commercially in California. The muscle of the shell is the only part of the abalone eaten; it has a delicious clam-like flavor. Scrub the shell thoroughly and separate foot and viscera from the shell by sliding a sharp knife between the shell and the foot and slicing, remove the viscera from the foot muscle, trim off the fringe and scrape the foot clean. Cut into slices or strips and pound the meat for a few seconds to tenderize it.

FRIED ABALONE

Fry in hot butter or margarine for about 1 minute, turning once. Season with salt and pepper. Do not overcook or it will become tough.

ABALONE CHOWDER

4 slices of bacon, diced,
6 slices of abalone, diced
1 medium potato, peeled and diced
1 small onion, minced
1-1½ cups hot water
3 cups milk
1 tbl. butter or margarine Salt and pepper to taste.
Cook bacon until brown in a 2-quart saucepan. Drain off all but 2 tablespoons of fat from the pan. Pound the abalone thin and dice it; add the abalone, potato and onion. Saute until golden brown. Add hot water and simmer gently until potatoes are tender. Add heated milk and butter, stir, then season with salt and pepper to taste. Serve hot. Serves 4 to 6.

submitted by E. Raynor.

PUZZLE CORRECTION

If you attempted to do the "Pisces Crisscross" in the last month's issue of the N.O.B. NEWS, you probably noticed a few mistakes. (To be honest, quite a few.) We apologize for not printing exactly what the puzzlemakers wrote. Here are the corrections:

carp	}	are in the list, but not the puzzle
goldeye		
humpback		
sockeye		

pink	}	are in the puzzle, but not the list
kokanee		
kickaninny		

turbot	is spelled "burbot" in the puzzle
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brooktrout	}	appear in the puzzle as "brook" and "brown"
browntrout		

Editor

B.C.-Yukon transport mesh planned

The federal government today announced plans for a multi-million-dollar expansion of road and rail systems in British Columbia and the Yukon.

"We must assume a substantial role in ensuring that the upgrading and rationalization of northwestern transportation systems occurs in time to meet major developments in the mineral and forest sectors of British Columbia," said Transport Minister Don Jamieson.

The minister told a press conference here of six major proposals that are presently under discussion by the B.C. and federal governments.

Jamieson said the proposals are being considered in order to improve the economies of the western provinces.

He said the proposed transport package, if adopted, would speed grain shipments, upgrade resource development in the forestry and mineral regions and help promote the planned expansion of port facilities at Prince Rupert.

The principal elements in the federal government's proposals are:

- Construction of two principal rail lines in order to provide access from the Yukon to Prince Rupert. The first would run from the Prince George region, through Dease Lake to the Yukon. The second would be a link between that line and the CN's east-west route into Prince Rupert.

- Construction of three new railway lines to serve forest areas at Ootsa Lake, Babine Lake and the Nass River, which would serve the forestry industry in the Prince Rupert-Kitimat area.

- Paving of 215 miles of the Alaska Highway between Fort St. John and Fort Nelson.

- Extension of the Liard Highway between the B.C.-Northwest Territories boundary and Fort Simpson, N.W.T. It would provide direct access from the Alaska Highway at Fort Nelson to the Mackenzie Highway, which is being built by the federal government.

- Improvement of the Stewart-Cassiar Highway and the provision of two additional subsidiary roads, which would result in a road link between southern B.C., the Yukon and Alaska.

- Construction of a

Skagway-Carcross Highway, which would provide Whitehorse, Y.T. and the southwestern corner of the Yukon with road access to the sea via Skagway, Alaska.

The plans, which are yet to be finalized by the two governments, would provide rail and paved highway links threaded into 600,000 square miles of the Canadian north-west.

Jamieson emphasized that financing of the proposed 10-year plan, which he said would cost "several hundreds

of millions of dollars," has yet to be worked out by the two governments.

Environment Minister Jack Davis, who also attended the press conference, said the new transport system could vastly improve the employment situation in northern B.C.

"The plan will enable a 1,000-mile northern railway to tap the mineral and forest resources, funnel them down through a major port at Prince Rupert, and trigger an expansion that could provide 18,500 new jobs over the next 20 years," said Davis.

The provincial government is already committed to a B.C. Railway (PGE) line from Fort St. James to Dease Lake, which is scheduled for completion in 1974.

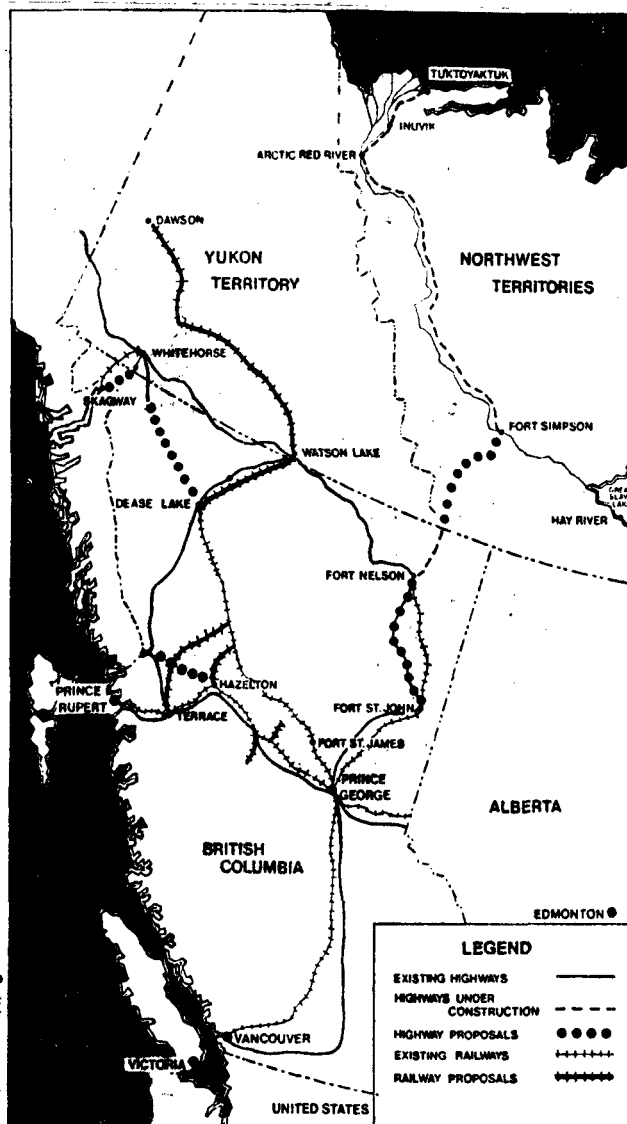
The federal proposal would be to construct a 115-mile link from the CN's Prince Rupert — Hazelton line to the new B.C. Railway line.

The cost of constructing the link is estimated at \$27.5 million, of which the federal government would pay 75 per cent.

Jamieson said the federal government has given approval for the CN to enter into negotiations with B.C. Railway to effect construction of the link.

"There is no question of the CN taking over B.C. Railway," said Jamieson. "But we think this is a logical package and it is now up to the two railways to get together."

He said present thinking is that the federal government will assume 25 per cent of the cost of the Dease Lake line from Fort St. James to the point where it connects with the Prince Rupert link.



From there to Dease Lake and on up to the Yukon border would be a 50-50 cost split.

The federal involvement for railways alone would total at least \$180 million.

CNR and B.C. Railway would have running rights in perpetuity over the Dease Lake line into the Yukon and the B.C. Railway would have running rights over the CNR line into Prince Rupert.

Commenting on the proposed rail developments, Jamieson said the new system is necessary in order to take full advantage of the decision to declare Prince Rupert a national port.

"While expansion of port facilities at Prince Rupert is seen as vital to the needs of the export market, it is also anticipated that provision of an adequate rail network in the hinterland area will both

trigger and provide the means for over-all development in the area," Jamieson said.

While conceding that highways in the province are within provincial government jurisdiction, Jamieson emphasized that the Alaska Highway is federally controlled.

"We would very much like to see the B.C. government take over the Alaska Highway portion that passes through B.C.," said Jamieson.

"With that in mind, we are very much disposed to paying the cost of paving the highway between Fort St. John and Fort Nelson."

Jamieson added: "I cannot anticipate how the British Columbia government will react to all these proposals, but I can speculate that the reaction will be enthusiastic."

VANCOUVER SUN,
JULY 4, 1972

At present there is no truth to the rumour that the Southern Operations Branch newspaper will be called the S.O.B. STORY.

PROPAGANDA.

The fundamental aim of management is to create an organizational climate in which individual and group effort is directed to clearly defined organizational purpose. MBO is concerned with results. Results are what count. People have a deep and natural desire to experience the sense of achievement that comes from striving toward and reaching meaningful and challenging goals. MBO is a way of focusing the resources of an organization on results. MBO is a way of fulfilling the purpose of an organization while at the same time satisfying the needs of individuals to achieve.

The mission of MBO is to create a new kind of organization, one animated by a sense of purpose, vitality and enterprise. It is a new way of life for management. It creates an awareness of the organization as a "total system". It creates a positive rather than a passive spirit. MBO assumes that the process of clarifying objectives, setting them and deciding on them will release the pent-up potential of people. MBO seeks to change attitudes and behaviour; it takes time, patience and leadership conviction from the top, to evolve a new set of attitudes.

MBO is in conflict with the rigid inflexibility of much thinking about "the right structure", the "immutable truth" etc. It views organization as a social-technical system in which the human factor is taken into consideration, as well as products, machines, technology, etc. Because the organization's values, attitudes and actions must impinge directly on the community, there is a challenging and constructive role in shaping tomorrow's future.

Managers who practice MBO speak and think goals and results; on the otherhand, those who favour management by controls speak and think in terms of what people are doing rather than why they are doing their jobs. The MBO manager sees contribution to organization's purpose as more vital than the work itself.

MBO is a powerful agent of change - the introduction of MBO changes fundamentally the relationship between managers and their subordinates: it requires managers to change their style.

Dial a Fish Service available weekends

RECORDED information on weekend fishing times is now available by dialing numbers in Vancouver and Prince Rupert after 4:30 p.m. on Fridays, the Fisheries Service reports.

The Vancouver number, 666-1101, provides recorded weekend fishing information for the San Juan Islands, Johnstone Strait, Strait of Georgia, Fraser River and coast Vancouver Island. During office hours, Monday through Friday, commercial fishing inquiries will be answered by staff at the same number.

The Prince Rupert number, 624-9137, gives weekend commercial fishing information for the area north of Skeena Inlet, including Queen Charlotte Islands. Week day inquiries will be handled at the same number.

Commencing this Friday, June 23, the new service for fishermen will continue until end of the fishing season.

"Recorded commercial fishing times are those in effect at 4:30 p.m. each Friday and are subject to change without notice," the Fisheries Service points out. "For this reason fishermen should check with fishery officers in local areas for possible changes."

A parallel service is being offered to sports fishermen who can obtain sports fishing reports on weekends by dialing 666-3169 in Vancouver after 4:30 p.m. on Fridays.

ABOUT THE FLIP OF THE FLY

Q

How does a fly land on the ceiling?
Does he fly upside down?
Bob Doom, Thompson, Man.

A

Flies don't fly upside down. They manage to land on the ceiling in a most ingenious way. While flying close to the ceiling, the fly reaches up and over his head with his front feet. When they touch the ceiling he does a half somersault over and lands square on the ceiling.

Flies are aided in this trick by their sticky feet. Six of them. Each foot has two claws, which the fly finds handy for clambering over rough surfaces when he's right-side up. Beneath each claw is a fleshy glandular pad called a pulvillus, which flattens out and secretes a sticky fluid when the fly walks. This enables the fly to defy gravity and walk around on the ceiling.

HERSCHEL ISLAND

Sir: I would like to correct some inaccuracies and omissions in a description of Herschel Island published in two articles by Mr. Senger (The Whitehorse Star, June 23, 1972). Mr. Senger claims: "Herschel Island has literally degenerated into a garbage dump." This same statement might be used to describe Whitehorse by a reporter whose only view of the city was of the dump while landing at the airport. Actually, less than one one-thousandth of the total area of Herschel Island shows any overt sign of human habitation. I agree with Mr. Senger that fuel barrels are eyesores and that the inhabited portion of Herschel Island looks messy because of many widely-scattered fuel drums. However, most of the island is pristine.

Mr. Senger's articles imply that Fisheries Service was responsible for leaving all of the fuel barrels at Herschel Island. This is not true. In fact, most of the barrels were already on Herschel Island and had been scattered around by high water and strong winds before Fisheries Service arrived there last summer. All of the empty drums belonging to Fisheries Service (Pacific Region) were assembled and lashed down to withstand storm winds last fall.

Arrangements were made last winter to remove all fuel drums used by projects associated with the Polar Continental Shelf Project, including those of Fisheries Service. A barge will pick up these barrels after the ice has broken up and receded from the coast.

James Bryan (Ph. D.),
Fisheries Biologist.

WHITEHORSE STAR

JUNE 28, 1972

GO NORTH AGAIN

I got the pipeline, tote-road.
drill-rig blues,
Easy money, boom-time,
more job news.
Oilers, muckers, rousabout
guys,
Expansion, inflation, money
on the rise;

More roads, wide roads, paving
crews,
Power lines, supermarkets,
wing-tip shoes,
Subdivision, government,
population boom,
Filling up the spaces 'cause
we gotta have room.

Bulldozer, swamp-fill, trailer
court woods,
Shopping mall city to supply
cheap goods,
Politician, dirty water, chain
saw noise,
Jet plane, snow-machine,
mechanical toys.

No fish, where's the game?
Soon to be gone.
Pretty quick smog to block
out the dawn.
If you doubt there's dim times
ahead
Just step from your mobil
home time can bed.

And look at what's happening
all around you,
Perhaps you will see what
makes me blue,
'Cause when The Yukon has
been done in,
There ain't much north to go
north again.

from 1970's: Hello!

Loping Bear

WHITEHORSE STAR

JUNE 26, 1972

N. O. B. NEWS

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WE'D BE MOST HAPPY TO RECEIVE: Clippings from local newspapers,
(send date of issue, name of paper, town), articles
written by fisheries staff(you), ideas, construc-
tive criticism.

ADDRESS CORRESPONDENCE TO:

M. Haugen,
Technician,
Dept. of the Environment,
Fisheries Service,
1090 West Pender Street,
Vancouver 1, B. C.

Mid-July cannery opening

Spokesmen for Canadian Fishing Company this week confirmed that the North Pacific cannery on Inverness Slough near Prince Rupert will be ready to begin production between July 15 and July 20.

The reactivated cannery will employ shoreworkers whose jobs at Canfisco's Oceanside plant went up in flames last month in the disastrous fire which ripped through the Prince Rupert waterfront.

It is anticipated that second shifts planned for canneries in the area operated by Cassiar Packing Company and Nelson Bros. Fisheries will absorb additional numbers of Oceanside employees, though exactly how many is not known.

At a meeting June 22 in Prince Rupert with UFAWU representatives, company spokesmen rejected union proposals that Oceanside workers unable to find other jobs in the area be transferred at company expense to other operations on the coast.

Arrangements made with other companies to give Oceanside workers preference of employment over new entries to the industry will make transfers unnecessary, they claimed.

Preference in hiring locally will be given first to those workers with established seniority, secondly to employees who were on call but had not put in their qualifying time, and then to those who had worked in the recent herring roe operation without establishing seniority.

So far, management spokesmen have also rejected a union proposal that existing seniority rights of Oceanside employees be extended by the amount of time worked this season for other employers.

However, agreement has been reached on freezing the Oceanside seniority list as it existed at the time of the fire.

THE FISHERMAN.

JULY 7, 1972

Aug. 1972

N.O.B. NEWS

Last Edition

NAME THE NEWS - PICK YOUR POISON

After a successful run of 5 editions of the N.O.B. News, this will be the last issue. In its place, with the combined talents of both Northern and Southern Operations Branches, we hope to publish a better, more informative and as yet unnamed paper. We also plan to permanently increase our circulation to take in all the staff in both branches, so for those of you who may be reading us for the first time, we welcome you and hope you find your paper both enlightening and informative.

All contributions will be accepted gratefully whether large or small. This is your paper and we need material to print. Send us your articles, cartoons, recipes, want ads, jokes or what have you----and we will do our best to produce a monthly paper worth reading.

A bottle of choice whiskey has been anonymously donated as a prize to reward the person suggesting the best name for the new paper, so if you are harbouring any great suggestions, get them in before September 23, 1972.

MANAGER'S REPORT

The salmon fishery on the north coast has been excellent. To date there has been a production of about 15.5 million salmon by both troll and net fisheries. Of this amount slightly more than 14 million were caught by the net fishermen. A breakdown of the catch by nets is as follows:

Sockeye	-	1.7	million	pieces
Coho	-	0.4	"	"
Pinks	-	10.6	"	"
Chums	-	1.3	"	"
Chinooks	-	0.06	"	"

14.06 million pieces

The net fleet operating north of Cape Caution has been relatively small this year, never exceeding 230 seines and 1200 gill-nets. The small size of the fleet is somewhat surprising although we know that a good many boats stayed with the halibut in Area 2 until closure on August 10th.

Two of the highlights of the current salmon fishery are: the very small size of the pink salmon - at approximately 2.9 pounds per fish, this represents a "loss" of about 10 - 11 million pounds and about 1.5 million dollars; and, the very good catches of chum salmon, at near-record levels of abundance.

Escapements of most species of salmon appear to be satisfactory.

On a more personal note, I'm off to the Yukon on Sunday (at last) and will be on tour until September 4th. When I get back I take off almost immediately for Ottawa in company with Mr. Hourston, Mr. Crouter and Mr. Wilson for a series of meetings September 5th - 8th.

Best regards.

R. MacLeod.

LABEL YOUR EFFLUENT!

Large numbers of water and effluent samples requiring analyses or bioassay which have been forwarded to our Cypress Creek laboratory from outside the headquarters area are not necessarily arriving there, are arriving there more by accident than design or are arriving there with instruction to the effect "do a complete analysis on this sample". On occasion the sender has not even tendered his name so our laboratory staff is left in a quandry as to where the results should be forwarded or who to contact regarding clarification as to the analyses required or the problem under investigation. Another difficulty is that the samples are shipped down C.O.D. thus making it necessary for our staff to arrange billing with the accounts department of the shipping agency. All of these factors contribute to delay which could invalidate the analytical results of samples subject to deterioration; delays in transmittal of results or even performance of the wrong analyses.

If the person submitting the sample is not sure what analyses are appropriate, he should call the lab at 922-4314 and discuss the situation with John Davidson, Lillian Martin or Elizabeth McGown so that the sample will be properly processed. Until our field manual for sample collection, handling and preservation is completed and distributed to all field personnel, it would be a very good idea to call the lab and be sure that the sample will be valid for the specific purpose in mind. A phone call is a minor expense compared to the costs incurred in collecting the sample, shipping it to Vancouver and performing the analyses or bioassay.

In all cases where the sample will be used as evidence for prosecution, the laboratory staff should be forewarned by telephone so that they will handle the sample in a way which will ensure continuity of evidence.

All samples should be clearly marked as to the date collected, the name of the collector and sender, and the precise source of the sample (e.g. seepage water from waste dump X, effluent from tailings pond Y, sediment from below logging operation on stream Z belonging to such-and-such a company). Bioassays require three to five gallons of sample. Used pickle jars and the like are frowned upon for use as sample containers and field staff should obtain appropriate containers. If they want containers returned they should so indicate.

Upon completion of the analyses, the results will be forwarded by the lab directly to the person who submitted the sample.

Hopefully these precautions will resolve the difficulties which both the lab and field staff have encountered.

When we have completed our field manual, one of my staff will be visiting the district offices in the N.O.B. to discuss its contents and instruct field staff how to properly collect, handle and preserve samples. This service is available to the Southern Operations Branch upon request.

W.J. Schouwenburg.

DID YOU KNOW?

Coho pass underneath the Alcan plant in Kitimat through a 2-3 foot diameter, 400 yard long pipe to spawn in a drainage ditch on the other side.

THE HAIR AND THE SALMON

or NEET removal of problem

The hair seal population on the B. C. coast yearly takes a rather large portion of the salmon gillnet catch. The Fisheries Service undertook a study of this problem during the chinook salmon fishery in the Bella Coola and Dean Channel areas. Because the chinook fishery in this area is largely a local fishery, it was relatively simple to record the salmon loss by seals.

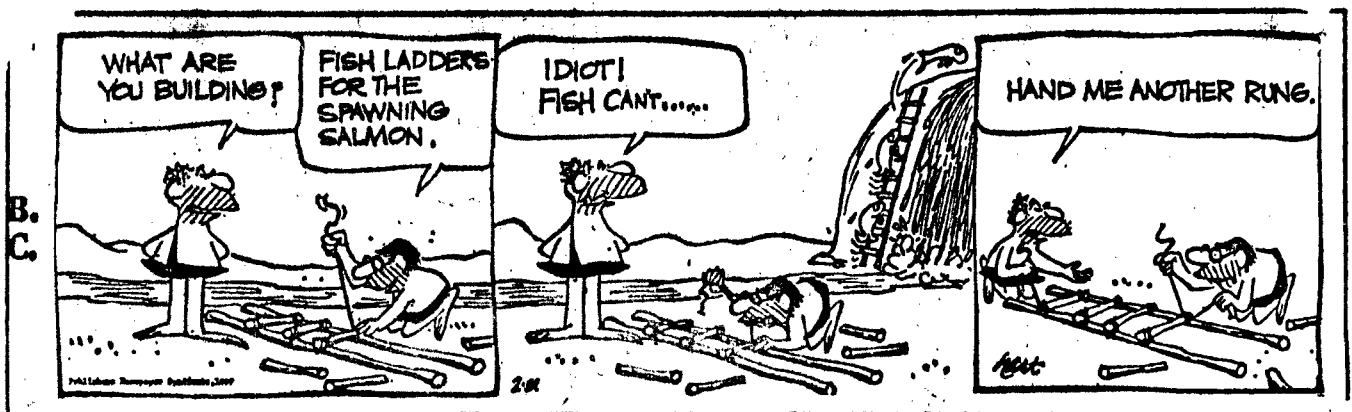
During the study period, May 15 to June 14, Mr. D. McNaughton and Mr. W. McNaughton on the vessel "Nighthawk" worked in the area estimating the seal population and encouraging fishermen to keep an accurate record of the numbers of chinook salmon that could definitely be recorded as lost to seals. The response from fishermen was disappointing, although they had seemed enthusiastic about the study and seemed eager to help. The McNaughtons have spent 15 years on the B. C. coast as professional seal hunters, and it is on this experience that the seal estimates were based.

Several interesting points were found during the study:

1. In the Inlets where there was no commercial fishery, there was a high percentage of immature (up to 3 years old) seals, while in the commercial fishing areas, the population was heavily adult.
2. Two or three seals may "team up" to drive a fish into a net; i.e., using the net to fish for themselves.
3. The main area of seal predation is in North Bentinck Arm. Fishermen will not fish the upper end of Dean Channel because the seals take virtually the total catch.
4. Based on field statistics, fishermen lost 1/3 of their income due to seal predation. The total earnings (per fisherman) was \$43,794. whereas total earnings including actual recorded losses would have been \$67,100. (This is based on physical evidence of fish lost. An additional loss of 10% was estimated for fish taken completely out of the net by a seal.)
5. Total seal population for the area was estimated at 510.

During the days of the bounty on seals, which ended in 1964, the annual seal kill brought no decline in the population. One year after the elimination of the bounty and the loss of a pelt market, there were reports of large losses to seals in the commercial salmon fishery. The McNaughtons estimate that a healthy seal population for this area should be 200. This suggests that drastic measures be taken, not only for the benefit of fishermen, but also for the benefit of the seal population. The ideal solution is to find a market for these seals - managed as we manage our salmon resource - for the Canadian people.

N. J. Lemmen



Vancouver Province

ECHO COUNTING FOR FISH ENUMERATION

The echo counter which has been under development by the Department for the past few years is now in what is likely to be its final form and is aboard the THRASHER ROCK in River's Inlet where its output is being recorded and compared to the output of the visual counts made by B. Scrivener. Using the visual counts, a correlation factor will be derived which can be used as a multiplier for the counter's output. At the time of this writing, the counter had been in operation for over two weeks, and the only problem encountered with the device was low battery voltage aboard the vessel. The machine appears to be doing what it was designed to do; that is, when there are targets on the paper, a number is recorded by the counter. The number is higher when the targets are near the surface than when the targets are deep. When there are no targets, the machine does not produce a number. This indicates that the machine is not counting noise and that the correction system which corrects for the changing cone width with depth is working.

A. Wiebe

National Claims
Growing

This summer's scheduled meeting of the United Nations seabed committee will take up a host of controversial international law of the sea issues.

To get an idea of the difficulties expected, we present a table of current national claims to territorial seas, where complete national jurisdiction is exercised, and the claims over fish resources or for pollution controls. The table appeared in the May *Surveyor*, published by the American Bureau of Shipping. (NS means not specified.)

ERROR

The July issue of the N.O.B. NEWS reprinted a letter written by Mr. J. Bryan, Fisheries Biologist, to the Whitehorse Star. Mr. Bryan informs us that he has not yet received his Ph.D. as was indicated on the letter to the Star.

Editor

DID YOU KNOW?

As of July 1, 1972, there were 678 people employed by the Fisheries Service in the Northern and Southern Operations Branches. Of these, 330 were casual employees.

February 17, 1876
THE FIRST SARDINE WAS CANNED

Country	Territorial Sea	Exclusive Fishing or Conservation Limits
Argentina	200	200
Australia	3	12
Brazil	200	200
Cameroon	18	18
Canada	12	12
Chile	200	200
China, People's Republic of	12	12
China, Republic of (Taiwan)	3	12
Colombia	12	12
Congo (Brazaville)	15	15
Costa Rica	3	200
Denmark	3	12
Ecuador	200	200
El Salvador	200	200
France	12	12
Gabon	25	25
Gambia	50	18
Greece	6	NS
Guinea	130	12
Honduras	200	200
Iceland	4	12*
India	12	112
Indonesia	20	20
Japan	3	3
Korea, North	12	NS
Korea, Republic of	200	200
Malaysia	20	20
Maldives	55	100
Mexico	12	12
New Zealand	3	12
Nicaragua	3	200
Nigeria	30	30
Norway	4	12
Pakistan	12	112
Panama	200	200
Peru	200	200
Saudi Arabia	12	NS
Senegal	12	18
Sierra Leone	200	NS
South Africa	6	12
Spain	6	12
United Kingdom	3	6
United States	3	12
Uruguay	200	200
USSR	12	12
Venezuela	12	12

* 50 miles as of 9-1-72.

Sources: U.S. Department of State, *National Claims to Maritime Jurisdiction*, January 3, 1972 and United Nations, *National Legislation and Treaties Relating to the Territorial Sea, the Contiguous Zone, the Continental Shelf, the High Seas and to Fishing and Conservation of the Living Resources of the Sea*, 1970.

SERVICES AVAILABLE FROM TSU ELECTRONICS SECTION

TSU has the capability of evaluating any electronic equipment that you may be considering purchasing. This service consists of a look at the circuit diagram and specifications, a circuit check to see that the equipment does perform to specification, and an assessment of how well the equipment will meet the user's requirements. Most manufacturers are willing to sell their scientific equipment on an approval before purchase arrangement.

A recent example of this service is the test of the Transmissometer purchased by the EPS group. These instruments were checked for stability and failed to meet the specification. The company was made aware of the shortcoming of their unit and has expressed a willingness to make the necessary repairs to the instruments to make them acceptable.

TSU has the capability to make recommendations as to the repair of old electronic equipment. All equipment has certain components which are subject to "aging". These components can be replaced for a relatively low cost. The instrument performance can be checked to see how its operation has been affected, and recommendations can be made as to what further repairs, if any, should be undertaken. This service should be planned in advance so that it can be performed while the instrument would not normally be used.

An example of this is the repair of the Beckman pH meter for the Cypress Creek Lab. Beckman's repair staff said the instrument was too old and needed to have most major components replaced. A local instrument repair service quoted \$100 as the minimum charge for the repair. TSU took the unit, and in our spare time, we replaced the aged components and a few sick tubes, and the instrument is working.

A. Wiebe

FISHING SUMMARIES AREAS 9 AND 10

Areas 9 and 10:

The sockeye run to Rivers Inlet was probably as close to the prediction made prior to the season's opening as it is possible to get. As expected the return of five year olds from 1967 was very light - almost insignificant in the catch until the last week in July and the early part of August. The return of fours from the 1968 brood year was as about expected also - the fish being extremely small - for the majority only slightly over 4½ lbs. The unexpected small size led to some good catches by gillnets using 4½" or 4½" nets, and to some very poor catches by those using larger sizes. However, once it became apparent that the majority of the fish were small, those lucky enough to have a smaller mesh size net available soon changed over.

The migration pattern appeared to be a steady light movement of fish into the inlet, with no exceptionally strong peak. The gear on hand very effectively exploited the migration during the fishing time despite which catches were very light. By July 29th pinks were forming the larger part of the landed catch. Seines were permitted to fish the last two days in the sixth week to exploit the obvious abundance of pinks.

Two seine boats were used to tag sockeye migrating to Rivers Inlet and other areas of the coast, one located in Fitz Hugh Sound and the other off Egg Island in Queen Charlotte Sound. The latter had considerable difficulty catching fish in offshore waters, however the vessel operating in Fitz Hugh Sound had good success. The sounding programme in the head area of Rivers Inlet was also continued with the "Thrasher Rock" and the "Miss Robyn" participating. The influx of pinks into the sounding area toward the end of July complicated our target count and test sets were made to try and estimate the percentage of Pinks in the sounding area.

Industry was generally well satisfied with the fishery. A weekly bulletin was issued to the fishing industry by us throughout the sockeye fishery. The bulletin contained information such as catch to date and by the week, escapements, information from the Docee River counting fence, target counts from the sounding programme. Also included were the reasoning behind our management decisions and the objectives of Rivers Inlet management. The bulletin was very well received by both company management and the fishermen, and it is intended that the issuance of this bulletin will continue in subsequent years. The run to Rivers Inlet this year can only be termed very poor, and will probably require stringent protection in subsequent years to revitalize this cycle. The fishery generally went smoothly mainly due to the consistent three day fishery made possible by the very light effort.

Area 10

With the inception in recent years of the outside boundary in Rivers and Smiths which effectively removes the "outside fishery" it would appear that outside gear has not moved inside to any great extent - it has simply gone. Only 120 gillnets operated in the peak week in Smiths Inlet, and it would appear that due to the conditions which prevail in this area, that they had some difficulty in fully exploiting the very small run experienced this year. With the Docee River fence count at 23,400 the decision was made to withdraw the main inside boundary to Burnt Island Harbour, allowing gillnets to operate up to the mouth of the Quascilla. The fence count eventually went to 76,000. Fish were still being observed through the fence on August 11th and our objective of 80,000 should be very close to being realized.

Jim Mackay.



"... and this amazing natural phenomenon causes them to find their way back in great numbers from the world's far oceans to this harbor and just sit and do nothing..."

Vancouver Sun, Dec. 1972.

AREA 8 COMMERCIAL SALMON FISHERY - 1972

The commercial net fishery for chinook salmon in Area 8 attracted 55 gillnetters at the peak in the week of June 11. The catch totalled 6900 pieces.

The Fisher-Fitzhugh fishery was closed from June 25 to July 9, and the Dean Channel and Bella Coola fisheries were closed (except for chinooks) to July 23 for the conservation of sockeye. A test fishing was conducted during this period in North Bentinck Arm and upper Dean Channel to determine when sockeye were clear of the area so that pinks could be harvested and to determine the size of the sockeye run.

The test fishing indicated that the Bella Coola return was poor, but Kimsquit looked fair. Age analysis indicated even abundance of 4's and 5's. A good number of spawners were observed on the Atnarko River near Lonesome Lake.

The pink salmon run was lower than the two previous cycles and the catch to August 19 was just under one million fish. Conservation by moving the inshore boundary seaward to close North Bentinck Arm was effective and escapements are expected to total near one million.

Summer chums have been good and the run is mostly 4-year fish. Coho and fall chums are forecast to be light and medium respectively.

G. Gjaltema

Shrimp Wastes

The bottom of Kodiak Harbor in Alaska is said to be covered as much as 20 feet deep with the wastes from fish processing. It is estimated that six pounds of raw shrimp are required to produce one pound of picked shrimp meats. Much of Alaska's shrimp production is centered around Kodiak and the residue is being dumped into the harbor. Previously debris from salmon packing and crab operations have gone into the harbor. The city of Kodiak, with Federal assistance, is now exploring a system of collecting all debris from the fish and shellfish plants in the area, treating it and hopefully finding some useful end products. There is felt to be considerable protein in material in the shrimp waste; also a low value salt which could be applied to highways for de-icing may be produced by treatment. ---Alaska Conservation Review, Spring 1972.

Curb on Seals

The United States wants to see the harvesting of fur seals partially halted and hopes to get Russia, Japan and Canada, co-signers of a fur seal treaty to go along. As announced by Secretary of Commerce Peter Peterson, the ban on killing seals on one of the Pribilof Islands near Alaska would allow an accurate comparison with the herd which natives would continue to harvest. The experiment would presumably put to rest the bitter argument between those who would leave the fur seals unmolested on the islands and those wildlife managers who argue that selective culling makes for a healthier herd. The four countries have an agreement, the North Pacific Fur Seal Treaty, which prohibits open ocean seal hunting in exchange for an agreed-upon distribution of seal fur. It has been in operation since 1911.

BEER SAUCE FOR FISH

Combine 1 cup mayonnaise,
½ cup catsup
½ cup beer
1 tablespoon lemon juice,
and ½ teaspoon prepared horseradish.

Chill.

Makes 1½ cups.

E. Raynor

Tit for Tat dept.: Revenge on a small scale for the American firms scalping our mountains in strip mining is the fact that the road crews widening the highway in Tsawwassen got their gravel from the nearest pit, which happens to be across the border in Point Roberts, U.S. of A.

The Amerks would fight rather than cede one inch, but by the cubic yard, that's different.

Province, Aug. 1972

PUBLIC OPINION OF FISHERIES DISPLAY

The Fisheries Service exhibit at the P.N.E. consists of the Capilano Hatchery model, the Babine Project model, an F.R.B. pink salmon experiment, and the "mini spawning channel", complete with adult sockeye and coho salmon.

In order to gauge public reaction to the display, I stationed myself near one exit and asked the visitors two questions:

- 1) What did you think of the Fisheries display?
- 2) What would you suggest to improve it?

Everyone told me they "liked" the display, in a tone suggesting polite indifference. Both the Babine and Capilano models earned some mild praise, and one elderly lady liked the "modernistic signs" and the large, colour photos.

Two boys about twelve years old told me they came to see the fish, and didn't look at anything else.

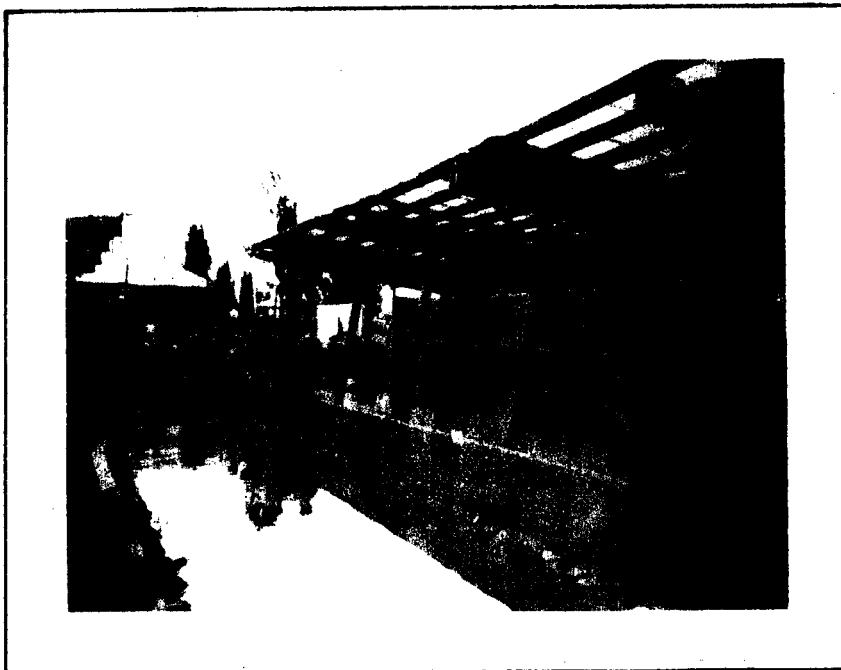
A young man told me that he had come to see the neighbouring Forestry Service display, and didn't look at the Fisheries exhibits at all.

The second question brought a variety of responses. A young couple suggested "tours" to point out things not immediately obvious, or at least have more people available to answer questions. They also thought the Babine model a bit vague, for example, where is the project?

There seems to be some confusion about the Fisheries Service "Buy-Back" program. Two men mentioned that they would like to see more information on the subject.

Several people are of the opinion that the Americans are taking too many "Canadian" fish. Perhaps some information about management policies and international fishing agreements should be made available to the public at the P.N.E.

One man would like to see a commentary on the salmon life cycles.



Many people suggested that we have more fish in the channel, not realizing, perhaps, that adult salmon cannot be squeezed into a small space and be expected to survive for very long.

Between "interviews", I had time to notice two interesting phenomena. One, that the live fish in the channel are the star attractions and people tend to cluster around the bridge where the fish hide. (The photo accompanying this article will attest to the fact. Along the right wall are the Babine and Capilano models.) Two, that once the Fishery Officer arrived for his shift, he became steadily employed answering questions. The public seemed to flock to the uniform.

Later, I talked with Fishery Officer Carscadden, who offered some valuable recommendations for improving our P.N.E. display. He suggested using pictures of adult sockeye and coho above their names on the channel, to enable observers to identify each species. He also felt that a prominent sign was needed, either outside the display area or on the channel itself, explaining what the channel represents, and what the adult salmon are doing. Mr. Carscadden suggested that there be two uniformed personnel per shift to answer questions.

M. Haugen.

MARINE UNIT - SOUTHERN OPERATIONS BRANCH

TWO NEW PATROL VESSELS ORDERED

A contract has been awarded to Canoe Cove Marina, Sidney, B.C. to supply two fifty-two (52) foot Deep "V" Fibreglass Patrol Vessels.

These units will replace the F.P.C. "STUART POST" and "BABINE POST" and will retain the names respectively. Delivery is expected December 1, 1972.

* * *

TUNA FOUND OFF WEST COAST

The F.P.C. "TANU" and F.P.C. "HOWAY" have in conjunction with their patrol commitments, carried out two Tuna exploratory trips each commencing on July 24. These trips have covered the area between 180 miles S.W. of Cape Flattery to 60 miles S.W. of Frederick Island (Q.C.I.).

Albacore tuna in variable abundance were found from 38 to 180 miles off our shores and the trolling fleet alerted. Fish taken ranged from 12 pounds to 30 pounds in weight and approximately 2,000,000 pounds have been landed by the fleet to date.

Eighty Albacore have been tagged, measured and released.

One more exploratory trip is contemplated in the series. The "HOWAY" will explore the waters off the Q.C. Islands out to Hodgkins Seamount during the last week of August. It is hoped that Albacore will be found so the Prince Rupert Troll fleet can reap some of the harvest if they become available off the northern area.

Current price for this fish is \$680.00 per ton.

M.B. Gay.

"He jumped on his horse and madly rode off in all directions."

S. Teacock

LETTER TO THE EDITOR

Editor:

An item for N.O.B. NEWS: -

It is noted that Public Service positions are being opened to both men and women, the latest notice put out for Ships Officers (Deck and Engineering) by our Department has the following note: "This Competition is Open to Both Men and Women".

Quoting from the information sheet - "Engineers' duties are those normally expected of a ship's engineer; the operation and maintenance of main propulsion and allied engine room and deck machinery, the making of routine repairs, control of equipment, supplies, fuel, the keeping of reports. In addition, engineers may be required to assist the master or Fishery Officer with stream clearance work, spawning inspections, small boat work, and perform other duties as required."

With female masters and engineers within our service, in the future there should be some interesting changes made in the "accommodations" on some of the smaller vessels, particularly in the isolated areas!!

With further reference to the competitions notice, it is noted "within the fleet there are opportunities for advancements". Attached is a copy of the notice.

"A female Regional Director" in Winnipeg would do something to the male chauvinism. This position has been also advertised recently as being open to men and women.

H. Burrow,
District Conservation Officer

TUNNEL COUNTER

The multiple tunnel fry and adult fish counter came a step closer to reality during this last week. The breadboard version of the fry counter was tested with fry at the Vancouver Public Aquarium, and the indications were that the system will work. The unit tested had four active tunnels and kept count of the fish as they moved through the various tunnels. Work will now continue on the bi-directional adult counter, and an attempt will be made to have a breadboard version complete with sixteen tunnels ready to test at Fulton on returning fish this fall.

A. Wiebe

FISHERIES SERVICE AT THE P.N.E.

The Fisheries Service exhibit at the P.N.E. underwent two weeks of cleaning, repairing and painting before the P.N.E. opening on August 19th.

The facility is now displaying the Capilano Hatchery model, the Babine Project model, and an F.R.B. pink salmon experiment. The most popular feature, however, is the "mini spawning channel" in the center of the area which presently holds about 25 adult sockeye and a few coho salmon.

The Fisheries Service display is adjacent to the Festival of Forestry area where the logging sports are held. The P.N.E. is open until September 4th.

M. Haugen

FISH KILL

On August 10-11, Fisheries Service biologist O. Langer and Fishery Officer W. Lowden, in conjunction with the Environmental Protection Service and the provincial Fish and Wildlife Branch investigated a fish kill on a tributary of the Little Campbell River in Surrey.

A B.C. Hydro contractor had sprayed wooden power poles with an all-purpose pesticide - pentachlorophenol. A pole in the center of the stream was treated and several gallons of the chemical entered the water, causing a total downstream invertebrate and fish kill for a half mile. Thousands of lamprey, stickleback, cutthroat and coho fry were among the victims of this very toxic chemical.

Samples are being processed by the Department of Agriculture, and other evidence is being reviewed by the Department of Justice, prior to laying a charge against the contractor and/or B.C. Hydro. Unfortunately, the use of this pesticide is presently not regulated by the province.

O. Langer

INDUSTRY WARNED

Must Police Itself - Williston

PRINCE GEORGE -

Ray Williston, minister of lands and forests, says the British Columbia forest industry must become more responsible or "we are going to be in a hell of a lot of trouble."

Speaking at the annual convention of the Norther Interior Lumbermen's Association Thursday, Williston said the industry must police itself in such matters as supplying the province's lumber demands and controlling pollution, or the government will force it to honor its duties.

Williston said he's not a person who believes in fines.

"The money paid in fines doesn't help the environment and the fines are just useless decorations."

Nevertheless, there were regulations which have to be obeyed, the minister said. If they were not obeyed, the company should not be in business.

"I suggest very strongly that the forest industry as a whole make an earnest effort to upgrade its pollution control activities as rapidly as possible."

The industry itself, which best understands its own problems and techniques, is better suited than anyone else to plan for multiple use of forests, he said.

(Victoria Daily Colonist, April 8, 1972)

FALSE ALARM

In early August, a "red tide" extending from Campbell River to Comox was reported. Patrol vessels investigated and obtained samples which were, indeed, red plankton. An analysis by the Fisheries Research Board showed that it was the harmless genus *Noctiluca* and not the deadly *Gonyaulax*. Routine sample analysis of shellfish taken from this area by the Fish Inspection laboratory showed all samples to be within safe and normal limits.

SUMMER OF 72

The downstream program at the Big Qualicum Development Project is now complete and presently the facilities are being readied for the fall program. A brief summary of the downstream results are presented for those who enjoy and expect them, after which is given an interpretation which will be just as brief and undoubtedly more meaningful.

Species	Location	Production	Percent Survival
Chum Fry	River Channel 2	16,500,000 17,000,000	12 64
Coho Smolts	River	27,900	
Chinook Fingerlings	River	87,000	

Dealing first with chum salmon production, levels of survival are similar to last year's but lower than the past flow control mean. Lower survivals are being partially attributed to the accumulation of sediment. The problem as stated is being assessed and appropriate measures to amend the situation are being investigated.

The second spawning channel at the Big Qualicum has completed its fifth year of operation. Little needs to be said of the success of the channel as a fry producer. Survival from egg-to-fry continue to exceed 60 percent and production levels in the 20 million range are expected to occur regularly in future years.

Rearing potential of the Big Qualicum River is being maintained under flow control. Production of chinook fingerlings and coho smolts are in line with past flow control averages. As the rearing area is the limiting factor in the production of chinook and coho in the system, flow control is not expected to have a tremendous impact on production of these species in the Big Qualicum River now or in the future.

Increased production of chinook and coho salmon; however, is anticipated to occur in the hatchery facilities. Excluding fish reared for other systems, the production of Big Qualicum chinook fingerlings and coho smolts each number about 200,000 per year from the hatchery. Increases in juvenile production will be possible through use of the first spawning channel as a rearing area each spring. In addition to providing a more flexible operation of the existing rearing ponds, a number of chinook fingerlings will be held in the channel next spring to test their response to such a facility.

While the immediate aim of any artificial propagation facility for salmon is to produce juveniles, the ultimate goal is to have those juveniles prosper and eventually contribute to the fishery, be it commercial or sport. To evaluate the success of Big Qualicum hatchery fish an extensive marking program is being carried out on both chinook and coho juveniles. The mark used consists of an adipose clip and a color coded magnetic wire implanted in the nose cartilage of the fish. This spring, 150,000 chinooks were marked and 100,000 coho will be marked this winter. While Canadian stocks are marked, those in many United States hatcheries will carry marks identifying their origins. In future years, an intensive U. S. - Canadian joint effort will be required to recover these marked fish. On completion of the program extensive information will be available to agencies in both countries regarding the contribution of specific stocks to existing fisheries, the migration routes, and the overall survival of juvenile salmonids to their adult stage.

While the production of juveniles is the major aim of a hatchery facility, and the ultimate goal is production of adult fish, alternate uses for our hatcheries have arisen, specifically, as suppliers for aquaculture. The Big Qualicum hatchery is without doubt small when compared with more recent

developments such as the Capilano hatchery or the proposed Quinsam hatchery. The Qualicum hatchery, however, has tremendous potential for supplying eggs to private individuals and companies for pen rearing of Pacific salmon to marketable size. The Qualicum has an established donor stock and with adequate management, this stock will remain intact to fill the demands of this new industry. When larger hatcheries become established and begin to supply their product for use in aquaculture, the "little" hatchery at Qualicum can again devote its total effort to the task of producing chinook and coho salmon that rear in the Gulf of Georgia and contribute to the livelihood of tourist operators and trollers in the Gulf.

Finally, the staff of the Big Qualicum extend an invitation to all Fisheries personnel to visit the site which is about 40 miles north of Nanaimo on the Island highway. The adult run of chinook salmon will be well underway in early October and other species of adult salmon can be seen at the project until late December.

J. Paine

GOLDSTREAM RIVER

This well-known river, situated about twelve miles from downtown Victoria, attracts some 50-60,000 visitors each fall. They come to watch about 12,000 chum and 2,000 coho spawn.

The river is closely observed and patrolled by the Fisheries Service during spawning season. The Provincial Parks Branch employs Mr. Freeman King, a naturalist who, at 83 years old, does a superb job of educating both young and old who come to observe the end of a life cycle and the birth of a new generation.

This year the Amalgamated Conservation Society (which claims 30,000 members on lower Vancouver Island), with the approval of the Fisheries Service and the B.C. Fish and Wildlife Branch, began a feeding program for coho fingerlings, in order to increase the number of smolts. Heading the program are Howard English of the Amalgamated Conservation Society, and Dr. D. Groves of the Nanaimo Aqua Farms Consultants. Three hired university students and 135 volunteers completed the team.

Stream improvement work was completed in July, on schedule. Costs will be borne by the B.C. Parks Branch, the B.C. Fish and Wildlife Branch, and the Fisheries Service.

H. Grainger

What happened to the report on the Big Qualicum M.B.O. "pep rally" held months ago... have we received it already, or can't anyone remember what happened?

RE: IN-HOUSE "NEWFIE" JOKES

A Newfie family moved out to beautiful B. C. and put their boy into school. Every morning the boy's teacher read from the Holy Bible and then asked questions about what she had read. As fate would have it, she asked this little Newfie lad, "When did Jesus die?". Staring up at her, he said that he didn't know. So the teacher told him to ask his folks and bring the answer the next day.

"When did Jesus die?", he asked his mother. But she didn't know either and told the Newfie lad to ask his father. His father thought for a long time about the question and finally answered,

"Son, you go to school tomorrow and tell your teacher that we just moved out here from Newfoundland and we never even knew he was sick."

PROMOTION FOR PHIL MURRAY

Mr. P.D. (Phil) Murray has been promoted to the position of Manager of Western Section, Conservation and Protection Branch in Ottawa, and will be concluding his last year as Director of Operations, Skeena River Salmon Management Committee about August 15th.

While Phil is well pleased with the prospects of his new job, and does not mind living in Ottawa where he has been for the last year on Temporary Duty, he nevertheless expresses some regret that he is leaving B.C., where he has resided for 15 years, and has many friends.

Phil served overseas during the war, in Bomber Command of the R.C.A.F., as a navigator. Navigating a big Lancaster bomber over enemy real estate was considered an extremely important, and possibly dangerous job. Some navigators suffered from an inferiority complex from comparing their role to that of the airplane jockey, or pilot. This was not entirely justified, as even navigators were required to remember their own names and Regimental numbers.

Following the war, Phil joined the Fisheries Department as a Fish Inspection officer in New Brunswick, his home province. During the late Fifties, Phil took advantage of a transfer to B.C., eventually taking up residence in Prince Rupert. Here he soon became the senior officer of Fish Inspection. Presumably during this time Phil and his growing family consumed a dragger load of Hecate Strait fish, plus a large portion of the deer population at Shawatlan Lake.

In 1964, Phil transferred from the Fish Inspection to the Protection Branch through a promotion to position of assistant District Supervisor under the Supervisor of District 2 at that time, Mr. J.R. McLeod.

In 1965, the Department in the Pacific Region underwent a reorganization, in which the three large Districts were re-formed into ten Protection Districts. Phil became District Protection officer in charge of Protection District #8. Phil remained in this position until December, 1966, when he left to attend Simon Fraser University, presumably to go to school with his sons.

At any rate, Phil proved to the youngsters that there was brain and determination somewhere in the family, as he graduated with a B.Sc in Biology in August, 1970. He then joined the Skeena River Salmon Management Committee as Biologist in charge of operations, in the footsteps of Ian Todd who had gone to Ottawa.

Phil remained in this position through the 1971 season, when he too went to Ottawa on Temporary Duty to assist Mr. E.T. Burrige. He returned in early July of this year to operate the 1972 Skeena Fishery and now returns to Ottawa to his permanent position. We all wish Phil and his lovely wife, Marj a happy and successful stay in Ottawa, and an eventual return to B.C.

J. Connor

'UNLIMITED' TOURISM PLAYGROUND

Recreation and Conservation Minister Ken Kiernan called Wednesday for development of B.C.'s west coast for pleasure craft cruising.

++ Kiernan, who is leaving politics after 20 years in the cabinet, told the Institute of Association Executives — trade, professional and charitable or-

ganizations — he has spent the past two weeks investigating the coastline between Vancouver and Ocean Falls.

He said the area around Bella Bella and southwest of Ocean Falls has twice the potential of the overcrowded Gulf Islands for tourist cruising.

"There are literally thousands of miles of inland waterways, sheltered coves, and sandy beaches there," and the area's potential is "unlimited."

Large-scale development would be necessary to provide facilities for pleasure craft use of the waterways, "but we

can do 10 times more there" than in the Gulf Islands.

Later, Kieran spoke on resource development and ecology, saying continued development and population growth can be harmonized with protection of the environment through careful planning, giving B.C. "the best of both worlds."

TRANSFERS AND PROMOTIONS

(The Peter's Principle In Action)

Miss Sharon Walker from F.R.B.C. in Winnipeg, Manitoba to CR 3 in the Northern Economics section.

Karl Petersen from EG 6 in T.S.U. to GT 4, hatchery manager, at Robertson Creek.

Dave Harding from Bio. 1 to Bio. 2 on reclassification appeal.

Phil Murray from Bio. 2, Skeena Management, to PM 6, manager of western section Protection Branch, Ottawa.

D. Aurel from G.T. 2 in Kamloops to G.T. 2, Kitimat.

D. Brock from G.T. 2 in Port Hardy to G.T. 2, Rivers Inlet.

T. Moojalsky from G.T. 3 in Port Hardy to G.T. 4 (Assistant D.C.O.), New Westminster.

G. Zealand from G.T.2 Rivers Inlet to G.T.3 Port Hardy.

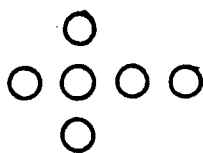
JAPANESE SALMON ROE IMPORTS AND PRICES

Salmon roe imports from Alaska and Canada are estimated at 4,995 metric tons for 1972. Sixteen different firms are importing the roe. One distributor's shipment totaled 860 tons. Prices for the "sujiko" range by grade from \$5.76 to \$3.03 a pound wholesale.

Pacific Trollers Association Bulletin

MIND BENDERS

A farmer had 17 sheep. All but 9 died. How many does he have left alive? _____



Put six coins in two rows as shown below. Move only one coin, change it to two rows of four coins.

Phil Meyers

IT IS IMPOSSIBLE TO RUN OUT OF ANYTHING IN ECONOMIC TERMS. ALL THAT HAPPENS IS THE PRICE GOES UP.....

REMEMBER TO GIVE US A NAME FOR THE NEWSPAPER. <u>A.S.A.P.</u>

N. O. B. NEWS

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TECHNICAL EDITOR: J. Kambeitz

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WE'D BE MOST HAPPY TO RECEIVE: Clippings from local newspapers,
(send date of issue, name of paper, town), articles
written by fisheries staff(you), ideas, construc-
tive criticism.

ADDRESS CORRESPONDENCE TO:

M. Haugen,
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Dept. of the Environment,
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1090 West Pender Street,
Vancouver 1, B. C.

OPEN HOUSE AT CYPRESS CREEK LABS.

A general Open House was held at the Pacific Environment Institute on Saturday, August 26. The affair was a smashing success, with approximately 2,000 people touring the premises.

The entire Institute went all out to put on a good show, with our Fisheries and E.P.S. lab staff taking an active part. The first thing on the agenda was a general clean-up, (it's amazing how much housework has to be done when company is coming). Then came the planning and arranging of the displays --- no small task. While we were busy at that, the landscapers and grounds personnel were working long hours to whip the premises into decent shape.

Saturday came along with the weather co-operating 100%. Last minute preparations were made and the doors opened at 12:00 noon to a rush that didn't let up until 4:45. The visitors were treated to a variety of displays, covering many aspects of environmental work. Our labs had displays on analytical chemistry (including mercury and pesticide analysis), bioassay toxicity studies, and species identification and enumeration surveys for pollution tolerance. Some of the other displays included:

A computer terminal that printed out a picture of a fish;

A large model of the Pacific Environment Institute as it will be when finished;

An operating table for fish, used for studying physiological effects of pulp mill effluent;

The research vessel "THE VECTOR", and

The submersible research vessel "PISCES IV".

The Honourable Jack Davis (Environment Minister) was on site to greet visitors.

After the last question had been answered and the last visitor had gone home, the Institute personnel got together for refreshments. All agreed that the visitors had been interested and interesting. Especially noteworthy was the good behaviour of the children. No damage to any equipment or display was noted.

In general, it was a very successful Open House. Plans are now being made for permanent displays.

L. Martin

SQUAMISH RIVER STUDIES COMPLETE

Environmental Quality technical staff contributed considerable effort to the Federal-Provincial Task Force on the Squamish Harbour development. The overall objective of this task force was to find an efficient design which would maintain adequate delta conditions for fingerlings. Other agencies contributing biological data were the Pacific Environmental Institute and the Pacific Biological Station of the Fisheries Research Board of Canada. These biological investigations were designed to determine the extent to which juvenile salmonids are dependent on the estuary of the Squamish River. The study undertaken by the Fisheries Service provides data on the utilization of the inner estuary by fish and on the organisms which serve as major food items.

Sampling in the Squamish River estuary was conducted weekly from April 11 through August 16, 1972. All data has been processed and a manuscript report will be published early in October. The Task Force report will be completed by the end of October.

D. Goodman
P. Vroom

Sun, Aug. 28/72

VICTORIA EXPERIMENT

Fishy sounds strike new note

VICTORIA (CP)—Don't expect a friendly reception from a rock fish. If one speaks to you at all, it will probably tell you to scram.

Dr. James McInerney, a biologist at the University of Victoria, is used to being told off by the captive rock fish he uses in experiments to identify the sounds made by the 20 to 30 species which inhabit Vancouver Island's coastal waters.

By the end of the summer, he and his assistant, John Yearsley, hope to have recorded and analysed enough piscine prattle to be able to identify species by sound alone.

McInerney said his fish talk most in tense situations.

"They don't make much noise when they are friendly," he said. "When fish talk they are usually telling another fish to clear out."

The researchers need to change fish every three or four weeks to keep the one-sided conversation going. Tame fish, it appears, have little to say.

After newly captured fish have identified their new aquarium home as their territory, a strange fish or a mirror is placed in the tank.

The normal response, say the researchers, is a blustery combination of raising fins, puffing out gill covers and noisy rage.

The sounds rock fish make range from a slow, steady beat to a series of fast popping sounds. The copper rock fish, for example, sounds like someone opening a bottle of champagne, while the black bass produces a tattoo any drummer would envy.

Yearsley, working as an undergraduate, learned that the sounds rock fish make are produced by a set of muscles extending from the back of the skull, along the swim bladder, and up to the vertebrae.

Fish can't differentiate between low and high sounds, McInerney says. The meaning of the sounds depends on whether they are fast or slow, "like morse code."

The researchers said that once fish talk is understood, it may no longer be possible for submarines to escape detection by travelling under a school of grouchy, noisy fish.

And it might settle fisheries disputes between West Coast fishermen and their visiting Russian counterparts.

Sounds made by fish caught in Russian nets might indicate just what species of fish are being taken from coastal waters.

The August-September issue of "Pacific Yachting" contains an article entitled "Cruising the Charlottes." Captain Ken Harley and the SOOKE POST are mentioned. The magazine is available in the library.

Editor

Angler ignores battlers while duelling with fish

STRABANE, Northern Ireland (CP) — It takes more than bullets to sway angler Bernard Browne. The 44-year-old publican was caught in cross-fire between British troops and Irish Republican Army gunmen during a fishing trip on the River Foyle in County Tyrone. With bullets flying inches from his head, Browne hooked a seven-pound salmon, played it for 20 minutes and finally netted it. "The gunfire annoyed me because I thought it would frighten the fish," Browne said. "But the salmon was delicious."

THE PROVINCE, Monday, September 18, 1972

"CANADA IS BLESSED WITH AN INEXHAUSTIBLE FISH SUPPLY."

from an address by the Honorable J. D. Hazen Minister of Marine and Fisheries, Sept. 3, 1915.

HOW ABOUT THAT?

THE ATLANTIC SAILFISH IS THE WORLDS FASTEST FISH WITH SPEEDS TO 68 MPH



Hugh R. Macdonald
-1972-

LETTERS TO THE EDITOR

PNE DISPLAY

Editor :

I was quite interested in your article on "Public Opinion of Fisheries Display" in the last issue of NOB NEWS because of my own impressions when I visited the display this year (In previous years, I had been unable to find the display and the people in the information booths always directed me to the Fish and Game exhibit.) I had 4 school-age children with me and was able to watch their reactions. The live fish caught their eye first, and as the channel was shaded, the fish were moving freely along its length. I heard someone call them trout although there were small signs saying coho and sockeye.

While the children were watching the fish, I noticed that the people who went to the models were moving on quickly to other things. When we moved on to the models, the kids, knowing that I knew something about their operation, asked me about them and while explaining the models to them, I became aware of eavesdroppers on either side of us who moved just ahead of or behind us as we went from model to model. Once we left the models, other people stopped at the models and moved quickly on. It is my feeling that people would have been more interested in the models if they were better explained. Most people don't know where Fulton River and Pinkut Creek are, and a minority would know where Babine Lake is.

Similarly, the F RB exhibit was badly described, although people were attracted to the live fish in the tank. Sex hormone would have been more easily understood by the average fair-goer than "gonadotrophic hormone" and most people don't realize that pink salmon mature in 2 years normally so that when the description said that these fish would be ready to spawn a year early, most people expected it to be 3 years instead of 1 year.

I would conclude from my observations that it is important that descriptive material can make or break an otherwise good exhibit and so it should be prepared for the people who are going to need it --- "gonadotrophic" is fine for scientists, and although "Fulton Fiver" is known by the people at Houston, it is meaningless to the average person from the lower mainland area. Also, you need to attract people to the exhibit by making it easier to find; if I hadn't known better, I would have thought it was a part of the Forestry display.

D. Harding

N.S.O.B. NEWS ?

Editor:

In the article "The Hair and the Seal", the sentence "The total earnings (per fisherman) was \$43,794. whereas total earnings including actual recorded losses would have been \$67,100." should attract every fisherman on the coast next spring! I'm sure the error has already been brought to your attention and that readers will realize that the \$43,794 was the total to the fishermen, not per fisherman.

I have my poison all picked out but simply cannot think of a suitable name for the new paper (N.S.O.B., i.e. the S is silent).

Thank you,

N. J. Lemmen, Fishery Officer.

We apologize for the misleading statement. We hope it won't discourage you from sending in more articles. Your paper name seems particularly appropriate this month --- Editor.

RBU's and MBO

During this summer and fall, both the Northern Operations Branch and Southern Operations Branch personnel are engaged in testing what is referred to as the RBU (Resource Benefit Unit) System. This is a system designed to help managers set objectives in recreation and also to help field personnel assess the present status of their recreational business as it pertains to their areas. Thus far, testing has been confined to four areas, two in the South and two in the North. In the Southern Operations Branch area, Areas 28 and 17 were selected as test areas. In the Northern Operations Branch, the Bulkley Valley-Morice River Systems and Area 1 on the Queen Charlotte Islands were selected as test areas.

The system itself, as it is now structured, is based on seven quality factors. These include catch success, crowdedness, remoteness, relative social or economic importance and accessibility. Attempts also were made to assess diversification of recreational opportunities in the area and some assessment of environmental degradation. Through use of these seven factors it is hoped that managers will be able to gain some insight into the intrinsic value of outdoor resources to the recreationalist and society as a whole.

While it is hoped that hoped that this system will help managers to overcome many of the problems which now exist in managing non-marketable outdoor resources, it is realized that the system in reality may not live up to expectations. Final assessment of the system's worth will be determined by those expected to use it. It is hoped that this summer's and fall's programs will give some insight to the overall worth of this system. Feedback from the test areas does indicate thus far that at the very least it helps officers become more critically aware of what recreational opportunities are available in their areas.

W. Sinclair

WOMEN DECKHAND UNWANTED

The Fishery Officers at Port Alberni thought that the following ad would be of interest to some of the girls in the office.

THE PRESS, UCLUELET -

THURSDAY, AUGUST 31, 1972
HELP WANTED - FEMALE

WOMAN DECKHAND WANTED
on troller. 20% and
future possibility of
marriage. Age 30 - 60.
Apply Box T, The Press,
Ucluelet.

Women in the office submit these comments:

- 1) No woman will settle for less than 80% if the prospects include marriage;
- 2) One will settle for 50% of the profits, but feels that certain "unstated services" must be worth another 40%.
- 3) One woman wonders if women deckhands are subject to "thorough searches" by fishery officers if caught violating the Act (Fisheries)?

EXPOTENTIAL GROWTH

There is a pond where water lilies grow. Each day, the number of lilies doubles, so that there are twice as many as there were the day before. At the end of 30 days the lilies occupy the entire pond, crowding each other out, using up the sunlight, air and water, and they die. The question is: When was the pond still only half full, still allowing room for the health and survival of the lilies? The answer: on the 29th day, just one day before the limit of the pool was reached.

from "The Energy Crisis: A Time to Choose", by Dick Bocking

Giant waves predicted

United Press International

MOSCOW — Soviet scientists predicted Wednesday that three or four tsunami waves triggered by undersea earthquakes would hit the western coasts of the Pacific Ocean in the years 1973-75.

Tsunamis, often incorrectly called tidal waves, are produced by submarine earth movement or volcanic eruption.

Scientists based at an institute maintained by the Soviet Academy of Sciences at Yuzhnosakhalinsk on Sakhalin

Island reported in the latest issue of the magazine Piroda (Nature) on the results of 50 years study of tsunami.

Tsunami studied so far appear to occur in groups of three or four every three or four years, the scientists said. By this reckoning, the next group should occur in the years 1973-75, primarily on a line between Alaska and Taiwan, and each should generate waves more than 3½ feet high when they reach the western coasts of the Pacific, the scientists said.

SCIENCE & TECHNOLOGY

by Sten Söderberg

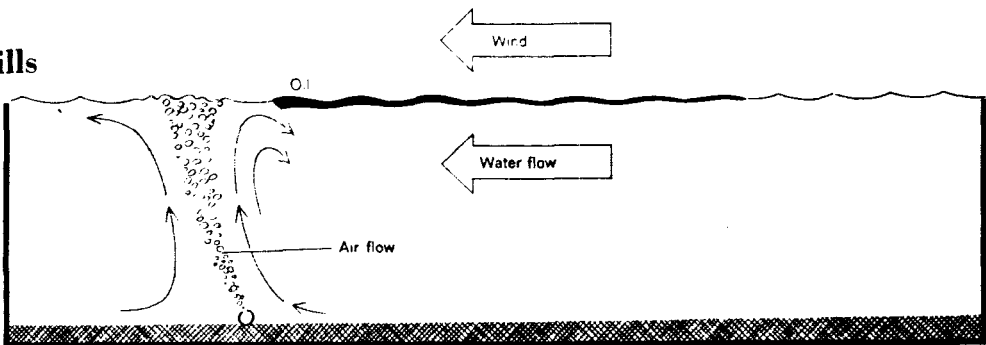
Barriers against oil spills

Full scale tests on the effectiveness of pneumatic barriers to arrest oil spills under the influences of wind, waves and current have been carried out by Atlas Copco. A perforated plastic hose is laid down on the sea floor and supplied with compressed air in order to generate a pneumatic barrier around the spilled oil. Tankers which are being loaded or unloaded in oilports can be enclosed by a loop-formed barrier thereby preventing any oil spill outside a restricted area. Atlas Copco has performed an intensive research and development program to design these pneumatic barrier systems for all realistic conditions, which might be defined in the single specific case. Such an arrangement has, for instance, been installed in Antwerp harbor, where already an oil spill of several hundred tons was closed in effectively.

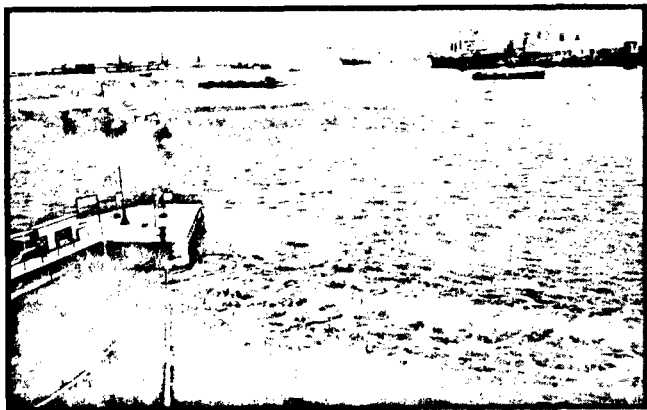
The cost of the plant for a pneumatic oil barrier is in the region of \$10,000-100,000, whereas an unrestricted oil spill can cost millions. During loading and unloading of the tanker the compressors operate at reduced capacity. When an alarm is given that a spill has occurred, the compressors can turn over to full capacity in a few seconds.

Waste becomes protein

Karl-Erik Eriksson, associate professor at the Swedish



Pneumatic oil barrier influenced by wind, waves and current.



Oil barrier in the harbor of Antwerp.

Forest Products Research Laboratory, and his co-workers, are now applying for patent rights for a new method of making use of the forest industry's waste products and recovering proteins from them.

Waste products such as fibers, bark and liquors have long been a source of anxiety for environmental care workers. But with microbiological methods, which for patent reasons have, as yet, not been fully divulged, it is now possible to convert the waste into products having economical value. This means that at one blow a difficult

waste problem is avoided, the profitability of the industry is increased and finally, products are obtained which the world needs.

Waste fibers alone amount to 500,000 tons annually. Previously, after filtering, these have been stored in the factory yards or have been used for filling up the gravel pits in the forests. However, it has been found that a fungus called *Chrysosporium lignorum* can break down crystalline cellulose within four days. Of the broken down fiber, 40% of the weight becomes fungus mycelium, which today con-

tains 18% protein. It is expected that the yield will be increased to 35%. This protein contains all the essential amino acids.

As the result of an investigation financed by the Swedish Board for Technical Development (STU), Eriksson and his associates suggest that attempts should be made to obtain products, which can be mixed with food for human consumption, from the fodder yeast which can be recovered from the waste from sawmills and fiberboard factories. Fodder yeast can also be used as cattle fodder, pig food, fish food and chicken food. The fodder can also be used as raw material for pharmaceutical, microbiological and biochemical industries.

Sweden Now, March 1972

GUIDE TO EMPLOYEE PERFORMANCE APPRAISAL - PACIFIC REGION

PERFORMANCE FACTORS	FAR EXCEEDS JOB REQUIREMENTS	EXCEEDS JOB REQUIREMENTS	MEETS JOB REQUIREMENTS	NEEDS SOME IMPROVEMENT	DOES NOT MEET MINIMUM REQUIREMENTS
CAPABILITY	Leaps streams with a single bound	Must take running start to leap over streams	Can leap over narrow streams	Falls into streams when attempting to jump over them	Cannot recognize streams at all
ALERTNESS	Is faster than a speeding Bullet	Is as fast as a speeding Bullet	Not quite as fast as a speeding Bullet	Was fast in the Rock Age	Wounds self with bullet when attempting to shoot
INITIATIVE	Is stronger than a locomotive	Is stronger than a bull elephant	Is stronger than a bull	Shoots the bull	Smells like a bull
ADAPTABILITY	Walks on water consistently	Walks on water in emergencies	Washes with water	Drinks water	Passes water in emergencies
COMMUNICATION	On radio telephone	Talks with megaphone	Talks to him-SELF	Argues with him-SELF	Loses those arguments

A NOTE FROM THE CYPRESS CREEK LABS:

The rough draft of the long awaited field manual for chemical sampling is now being typed. The completed version should be ready within two months.

L. Martin

"ECONOMIC RENT" LEVY ON HERRING

B.C. Herring Management Committee, meeting in Vancouver on August 18, heard proposals for limiting the number of boats in the herring fishery and setting up a "working group of fishermen and industry advisors" to assist the Fisheries Service draw up regulations aimed at encouraging growth of the herring food industry.

Submitted by Fisheries Service staff, the proposals are slated for further discussion by the management committee on September 15.

One of the advisory group's tasks would be to work on a controversial proposal for limiting the number of seiners and gillnetters participating in the 1973 fishery.

Recommendations call for the "generating of economic rent" by the fishery in order to "defray cost of management and research expenditures required to assure resource viability."

In plain terms, this would mean imposing either a huge increase in licence fees or an escalating schedule of "catching fees" based on the tonnage of fish landed by each vessel.

EXPORT BAN

Other recommendations call for stricter surveillance of the fishery by department officers and a ban on the export of frozen roe herring.

Regulations proposed for 1973 would see the herring roe fishery open on March 1 and close April 30 with a catch limit roughly equivalent to this year's production, of 50,000 tons.

'ECONOMIC RENT'

Discussing staff proposals for the development and management of the herring operation, the Fisheries Service says:

"In order that potential benefits of the fishery are not dissipated in excess participation and overcapitalization, and in order to create a viable segment of the

industry which will form the base for future expansion over the years, it is proposed that not more than 75 purse seiners and 200 gillnetters participate in this fishery in 1973.

"It is proposed that a group of fishermen and industry representatives work with the Fisheries Service in determining ways and means to allocate licences for this fishery.

"The herring roe fishery provides an opportunity for generating economic rent for the owners of the resource — the people of Canada. Revenue set on a user-pays basis will provide funds to defray cost of management and research expenditures ...

CATCHING FEES

"There are two basic ways by which such revenues can be generated from this fishery.

"One way would be a nominal licence fee on all vessels participating in the fishery, including packers and collectors, coupled with a catching fee starting initially at \$4 per landed ton and gradually increasing over the next three or four years.

"The other approach is a system of licence fees based on vessel size, including packers and collectors. The licence fees required to generate revenues equivalent to the first approach would be substantial, ranging from \$2,000 to \$3,000."

The department also advocates changes in "the day to day conduct of the herring roe fishery."

These would include keeping areas closed "until opened by fishery officers in the field when the fish are mature enough to assure a high yield" and prohibiting the dumping or exporting of carcasses.

Where high gear concentrations are likely to occur, "industry must be prepared to work out with the Fisheries Service methods of

limiting the number of vessels on the grounds at any one time."

Export of frozen roe herring would be banned "in order to assure the highest degree of employment benefits possible in this country."

In a separate paper distributed to the management committee meeting, the department said it visualized the herring resource being able — "possibly by 1980 and certainly by 1990" — to support an industry producing wholesale values of \$100,000,000 a year. This year's roe operation yielded a record wholesale value of about \$14,000,000.

To attain the \$100,000,000 target, industry must "conduct an aggressive product development and marketing campaign ... supported, encouraged and even pushed by an imaginative fisheries resource management program."

Cost of this development campaign, the department says, would be borne by fishermen themselves.

The herring roe fishery can be monitored more effectively than a fishery on mixed stocks, such as the former reduction operation, the department contends. Nevertheless, there is still a danger of over exploitation and a need to ensure that "uncontrolled fishing effort" does not occur.

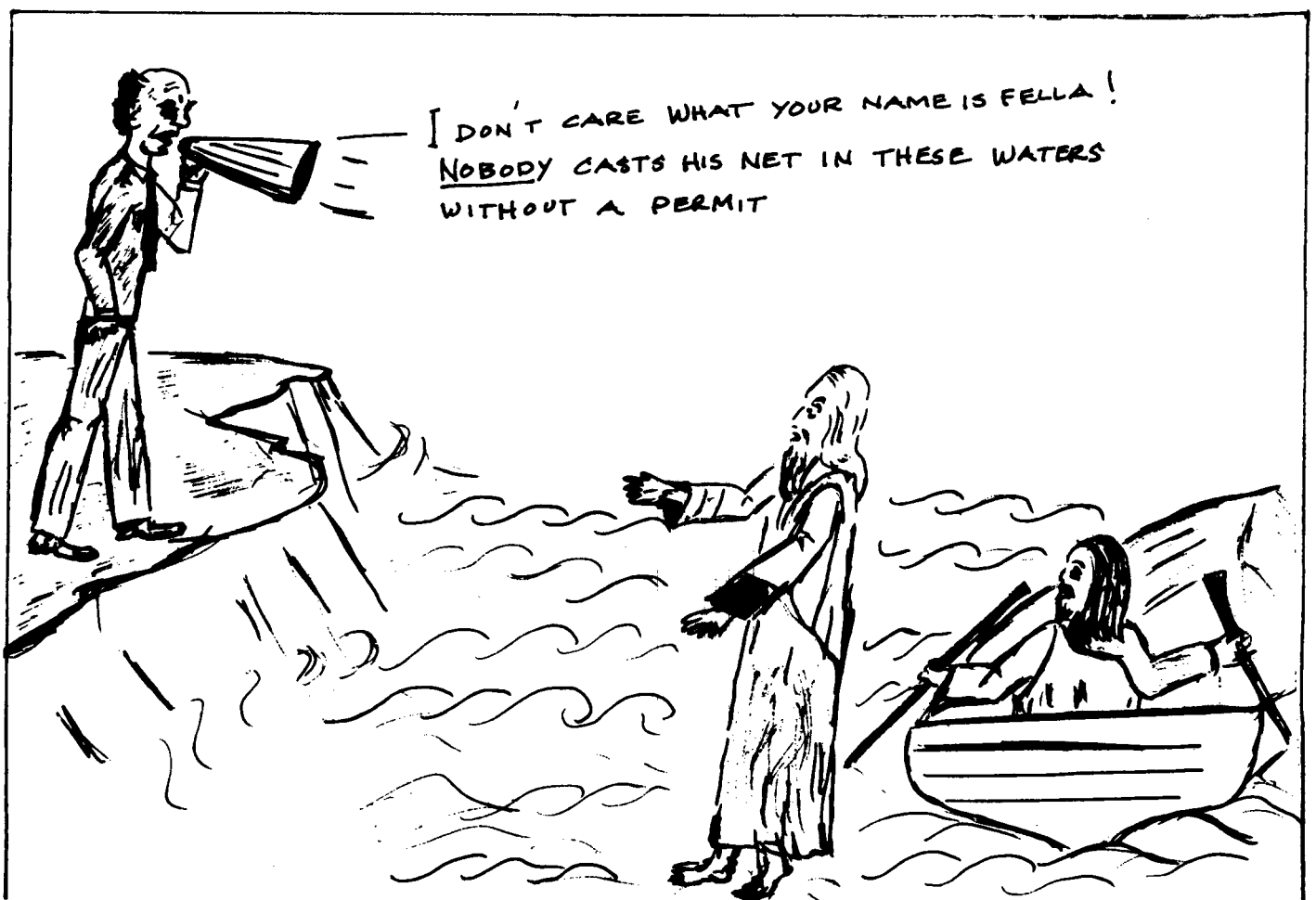
'SAFETY MARGIN'

Accordingly, "some degree of under-utilization must be accepted to provide a margin of safety until information and experience are such that harvestable surpluses can be more accurately predicted and discrete stock abundance can be assessed."

In addition, it would be "wise to leave a further safety margin" until there is better understanding of the role of herring in the overall marine food chain.

To attain the goal of "high levels of social and economic benefit," the Fisheries Service says, the herring industry must emphasize better quality and the diversification of products.

The Fisherman, Sept. 1/72



WHITEHORSE B&E

In the early morning hours of August 22, the offices of the Fisheries Service at Whitehorse, Yukon Territories were broken into. Entry was gained by smashing through the glass in the front door. After entering, the intruder rifled through the various desks but did not appear to take anything even though there were several rifles, a camera and projector and other valuable equipment readily available. The same evening several other government offices were broken into. Later in the week, the RCMP charged two individuals with breaking and entering of the various offices.

G. Jones

NORTH PACIFIC FISHES

The Vancouver Public Aquarium has produced a full-color wall chart (23 inches x 32 inches overall) of the marine FISHES OF THE NORTH PACIFIC COAST, printed on a glazed paper stock. Copies are available at \$2.00 by writing to the Store Manager, Vancouver Public Aquarium, P. O. Box 3232, Vancouver 3, British Columbia, Canada. Developed under direction of qualified marine biologists, this chart portrays 58 species of marine fishes in readily identifiable form. It is a useful aid for visual familiarization or refamiliarization with some of the more important commercial, sport, and forage fishes of the region.

Sport Fishing Institute, Aug. 1972

Cleanup alters moths' colors

MANCHESTER, England — Zoologists report that Manchester's moths are changing color as a result of the city's clean-air policy.

The moths' wings, previously a dull black, are turning a buff shade.

MENDING FENCES (If At First You Don't Succeed)

When it comes to dogged determination and utilization of equipment available, the northern half of the NOB and Chuck Walker's crews in particular are going to be hard to beat.

In July a final decision was made to place a temporary counting fence and towers on the Nisutlin River to enumerate chinook salmon. When construction of the fence started, the river was 370 feet wide with an average depth of 36 inches and a velocity of 5 feet per second.

Shortly after construction started someone pulled the plug. It rained almost everyday for a period of two weeks, and periodically for another week. During that time the river levels fluctuated considerably, causing the fence to wash out on two occasions. When the fence washed out for the second time, the average depth of water was about four feet and at a much higher velocity than when construction started. The day the fence washed out for the second time, the water levels started dropping again, and as a result the fence was reconstructed. This time it stayed, as water levels continued to drop, and an enumeration of passing chinooks was completed, although part of the run was lost when the fence was out for the 2nd time.

Following completion of the chinook salmon count, the counting fence, tents, motors, boats and gear were transported over 660 miles of road by three trucks and another 70 miles of mountains by helicopter to a site on the Fishing Branch of the Porcupine River, where it was reconstructed and is presently being utilized to enumerate chums.

This is the location where 250,000 chums were observed last year, in an area that remains ice free throughout the winter.

By the time this project is completed not only will the fellows be sweeping snow off the tents, they'll be bearing grizzlies into the bush. With the high concentration of fish in a relatively small area this is a prime area for grizzlies and on every trip into the area they have been sighted.

If nothing else the fellows carrying out these surveys are entitled to an "A" for effort.

G. Jones

MANAGERS REPORT

J. R. MacLeod

What a wonderful trip to the Yukon! From Vancouver to Edmonton to Inuvik via commercial airlines; by charter Beaver along the Arctic shoreline to Herschel Island, abandoned as a trading post and RCMP station, but still supporting four Eskimo families at the time of our visit. Inland over a tremendously impressive escarpment to Old Crow where we stopped for two nights. Jim Bryan and his Yukon Pipeline study group gave us the \$5.00 tour - I think I was most impressed by the chum salmon spawning grounds and surrounding area on the upper Fishing Branch River. These spawning grounds are home to as many as 250,000 chum salmon. We saw a few in the food fishery, vicinity Old Crow - they looked like the "rainbows" we see in our stream mouths just as they move upstream. To Dawson City, almost a derelict, so decrepit and shabby it seemed. Saw a fishwheel in operation - with a catch of one chinook, one chum and two inconnu. Also saw the abandoned gold dredge sites on the Klondike River and Bonanza Creek; even saw a few dead chums on the very impressive spawning grounds of the Klondike River. On to Whitehorse for three nights, visiting the Nusitlin River (chinooks), Atlin Lake and adjacent potholes where Chuck Walker and his troops planted some rainbows this spring and also visited Aishihik Lake, the proposed source of NCPC energy where Barry Lawley provided us with coffee and local lore. I think that what impressed me most about the Yukon was its vastness and the amount of water - lakes, ponds, rivers larger than the Fraser, streams, creeks and just plain water-soaked tundra. Another aspect that left an impression was the apparent lack of feeling or concern for fish, particularly salmon. The salmon is still thought of in terms of dog food and even in this regard its usefulness is diminishing as snowmobiles replace dogs. In our eyes, however, the salmon resources of the Yukon are worth several millions to Canada in respect of equity with the U. S. fisheries. Allan Gibson has a big job to convince Yukoners that all Canadians have a very high stake in Yukon salmon.

Went to Ottawa September 6-8 to participate with Fisheries Mission (Operations under C.R. Levelton and R & D (ex FRB) under Dr. Anderson) people from across Canada. The good news is that we all came home with our MBO intact.

Over the next few months we will be devoting our attention to developing the 1974-75 program forecast and the 1973 work budget. Also, as I mentioned in an earlier edition, we expect to start moving MBO down the line early in the next year. I hope to meet with fishery officers at Prince Rupert in late November to review our 1972 Salmon Expectations, the 1972 salmon fishery, and the 1973 Salmon Expectations. This will be followed by a series of meetings with fishermen at various coastal communities, including Prince Rupert, to discuss the 1973 Expectations and to review problems arising from the 1972 fishery.

As the salmon season draws to a close I want to thank all of our staff in the field for their efforts. Particular and special thanks go to our vessel masters, many of whom by virtue of their specialized local knowledge are very key people in our fish management programs.

OLD CROW NEWS

The Whitehorse Star, August 28

Here are the news.
August 19. A charter plane arrived here from Ft. McPherson on board is Peter Kay and his wife Mary came over to see Joe Kay.
Joe Kay he had three sister and one brother Johnny Kay. So these Peter Kay he was son of Johnny Kay and he was lucky to be here while his uncle was sick and now his uncle pass away. Joe Kay he was not to well so he been out to Edmonton Hospital twice. The last time he been out but I don't think he get help so all spring and summer he was sick long time.
Joe Kay he was good old man he friendly with any body kids and all.
When he visit around he always had a song for small kids and they dance for him.
He had four daughters and one son John Joe Kay that is his son.

Three of his daughters and son were in old Crow and her daughter Hannah Netro is staying in Whitehorse. But ask soon as she heard his father pass away she arrived old Crow.
Joe Kay he had lots of freind and also W.A. visit him and set with him day and night. So August 21 Monday morning God want Joe Kay so he did take him away from us and he had resting place to sleep. He die around 12:30 a.m. he just like went to sleep. So that day it was nice clear weather and sunshine. As soon as we hear Joe pass away and everybody at his house and all the mens and boys dress him.
And about four mens are working for forest and they are carpenter and they make a nice coffin for Joe Kay.
Same afternoon they dig ground and Tuesday morning they did some more and Tuesday they cook at his son John

Joe Kay house and everybody went their and eat all the fishers and wild life boys and R.C.M.P. and nurse and Miss Buckley.

Charlie Thomas he shot one moose last month and he give the head to women for soup and everybody had a head soup.

As I know all his kids and wife Myra Kay they all thanks the people for all their nice work which they did for Joe Kay.

I hope everyone help Myra Kay for wood and anything and also prayer for her to be happy every day.

Doctor arrived here to check the patients from Whitehorse and Eliza Ben and Clara Tlizzah are going to hospital at Whitehorse.

End the news.

-- Edith Josie

BRASS TOURS YUKON

Editor's Note:

N.O.B. Manager, J. R. MacLeod, accompanied by the writer, Garnet Jones, Supervisor, Yukon District, and Bob McIndoe Sr., Chief, West Coast Vancouver Island District, completed an eight day tour of the Yukon on September 3.

Winter comes early in the far north so we started off by heading for Inuvik where a float equipped Beaver was chartered for a flight to Herschel Island and Old Crow.

From Inuvik we checked road construction, seismic camps and DEW line stations. Several Beluga whales were observed in the shallow Beaufort Sea just prior to our landing at Herschel Island. We spent almost an hour there watching the eskimos hunt seals and the huskies eat fish. Herschel Island seems a truly forbidding place to us even with the temperature a balmy few degrees above freezing.

The route from Herschel Island to Old Crow followed the Firth River, a watercourse that flows north into the Beaufort Sea. The valley was a real eye opener, being the most northerly extension of the tree line.

The sun came out half way up the valley and stayed with us for the rest of the trip. Game is plentiful in this valley with moose, sheep, caribou and Arctic char seen from the air. Grizzlies and wolves are also plentiful but were not seen.

We landed at Old Crow on the Porcupine River just in time for supper at the Fisheries pipeline study camp. We had actually gained 3 hours from Inuvik time and I still don't understand how!

The pipeline crew have done wonders in setting up a 12 man bunk house, laboratory, warehouses and outhouses. We were told it takes one man two weeks to dig an outhouse hole in the permafrost!

The following day the party split up and inspected various pipeline study activities.

On Wednesday morning we left Old Crow impressed with the outgoing nature and the self-respect of the Loucheaux Indians. The Fisheries group were well liked by the people, due, I am sure, to the efforts made by Jim Bryan and his crew to communicate with them on their level.

Next stop was Dawson City after a 2 1/2 hour flight south. We were met by a Patrolman and Student who work together in this area on the commercial fisheries and stream inventory. A helicopter flight was arranged for the afternoon.

A commercial fishwheel on the Yukon River was checked at the abandoned village of Moosehide and the catch so far was 1 spring, 1 chum and 2 large inconnu. Next was a stream survey of the Klondike River, once the most productive spawning grounds on the Yukon system. We flew 40 miles upstream and saw the result of 50 years rape by the gold miners -- a handful of salmon and mile upon mile of coarse gravel churned up in windrows 50 feet high from one side of the valley to the other. Dinner followed at the best place in town, "Jack's Hamburger Stand", and then the B. C. election was covered at the various watering places in town.

A tour of Bonanza Creek and the gold dredges was on for the following morning after a light breakfast at "Black Mike's Saloon" followed by another 2 1/2 hour flight south to Whitehorse.

Friday was spent looking over the Whitehorse Dam and the longest fish ladder in Canada, then a short 70 mile trip by car to some "pot-hole" lakes that were stocked with coho and rainbow this June (see July issue of the N.O.B. News). Several samples were caught for a "taste panel" to be held shortly when the necessary

V.I.P.'s are on hand! We then continued down the Alaska Highway for another "short" 70 miles to the counting fence site on the Nisutlin River. This was a very bold attempt to count chinooks over 2,000 miles upriver where the width to be fenced was 371 feet and up to 4 feet deep. The problem of the size of rivers to be studied and the distance between points really sunk home on the Nisutlin.

Our last full day -- Saturday -- was spent flying Aishihik and Seculmen Lakes where a hydro development is planned. While this development is almost a foregone conclusion, we have to recommend either flooding or draw-down storages as the least damaging to the fish resources.

We left Whitehorse for Vancouver on Sunday after a week of perfect weather and no changes to our planned schedule -- something that may never be repeated. Ron MacLeod will never believe that inclement conditions do plague the Yukon -- until his next winter visit!

We all owe a vote of thanks to the "Fisher folks" of Old Crow for their hospitality, Garnet Jones for organizing the trip and the weather for its unexpected break.

A. Gibson

Sun, Sept. 22/72

Oregonians take ecology seriously

By BOB ROSE

SALEM, Ore., (CDN) — It's okay to put up a roadside billboard in Oregon — just as long as nobody can see it. Of course you have to get a permit first.

But they aren't issuing any.

And, starting Oct. 1, beer and pop cans are out. So are non-returnable bottles for the same. Breweries and the soft drink industry are up in arms. But that's the way it is.

You see, the chinook salmon are back in the Willamette River, once the filthiest waterway in the Pacific Northwest. Your kids can swim in it without fear.

These are just ways of saying Oregonians take ecology seriously.

"We really do. This isn't just an affectation," Gov. Tom McCall said in an interview. "I think we've got the majority with us."

Unlike most U.S. states, Oregon no longer beats the drums for more tourists or new industry.

"Nope. We tell businesses that want to move in here we have a very exclusive club. First thing we do is put a bunch of engineers on them, see if they're going to be a pollution problem," McCall said.

American Can put in a new plant, the most modern in the industry, and had to meet tough state restrictions every step of the way. McCall used to cite it as an example of what can be done.

"I was doing so in a seminar down in Houston and an American Can vice-president got up, frothing. He said 'I can't stand this any more. We haven't made a damn penny on that plant,' McCall recounted, grinning.

The state is just as tough on its old-time businesses.

One of Oregon's biggest employers kept promising to clean up a pulp mill operation, but didn't. The state shut them down until they came up with a signed agreement spelling out precisely what they would do and when.

"People didn't think we'd do it. The company sent its workers over to us when we did. They picketed. But they went back and picketed the plant once we explained it to them," he said.

Oregon's ecology thinking hits a lot of different areas.

Item — billboards. The state is preparing, with federal assistance, to buy up the last of some 3,700 signs along its highways. It has already enacted a tough law forbidding any new signs visible "as far as the eye can see" from the road.

The law provides for permits.

"But we aren't issuing any," McCall said.

Item — bottles and cans. The legislature enacted a law forbidding the sale of canned beer and pop and requiring all such bottles to be returnable. The move is being challenged in the courts.

Ice gouging studies to continue

By LYDIA DOTTO
Globe and Mail Reporter

MONTREAL — Wind-driven ice ridges that gouge the Arctic sea bottom will present an unpredictable hazard to oil pipelines in northern waters, according to Bernard Pelletier, chief of marine geology at the Bedford Institute of Oceanography in Dartmouth, N.S.

Dr. Pelletier, who is attending the International Geological Congress, said in an interview he did not think the ice would ride over a pipeline placed on the sea bed because it is under tremendous pressure, so it would probably be necessary to excavate a ditch beneath the level of the gouges in which to lay the pipeline.

He could not estimate how much this would add to the cost of a pipeline, but said that "because of the demand for energy, the payoff will be so great that this will be economically feasible. We'll pay more, but we'll get it out."

He added that the pipelines affected would probably be relatively short ones. In one likely location, off the Mackenzie River delta, the pipeline would go for only about 25 miles under water before being brought up on land.

Dr. Pelletier's studies of ice scouring started last year in the Beaufort Sea, along the west coast of the Arctic Islands and along the north slope of Alaska. It is planned to repeat the studies during July and August every year for several years.

Dr. Pelletier said the scouring also happens on the east side of the Arctic. "This may

be a danger all through the Arctic." But he added that the danger would probably be less in the inlets and channels among the islands.

The ice, driven inshore by winds, gouges troughs in the bottom to a depth of from two to 30 feet. The average depth is about six to 10 feet.

The scouring extends out from the shore about 45 miles. On the average, it is found in 150 feet of water, but scouring has been detected in water up to 250 feet deep.

Scientists have not yet determined the frequency of this gouging, but Dr. Pelletier said that the area extending 10 to 15 miles from shore is scoured every year.

"Within the first 20 miles from shore, there's nothing that hasn't been scoured. Every square foot is crisscrossed."

He said the oil companies are trying to determine the frequency of scouring, but "even if they do, this will only be statistical. They'll know that one is going to come over, but they won't know when or where. They'll never know."

"You only have to lose once — and it's game over," he added.

He said it probably would not be safe to lay a pipeline on the sea floor within 40 to 45 miles of shore. The deepest gouges are found about 30 to 45 miles offshore, in water 150 feet deep.

Whitehorse Star
Aug. 28/72

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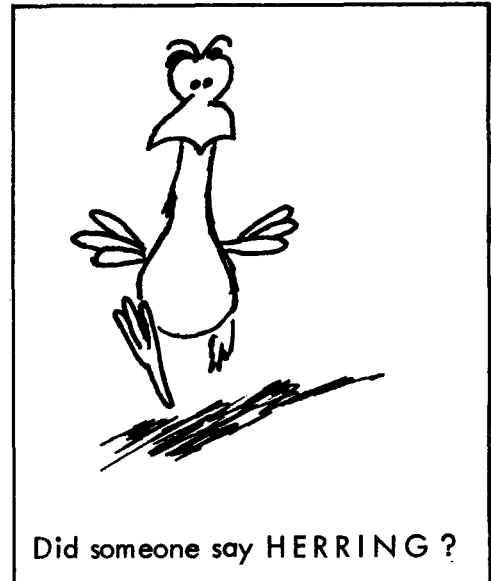
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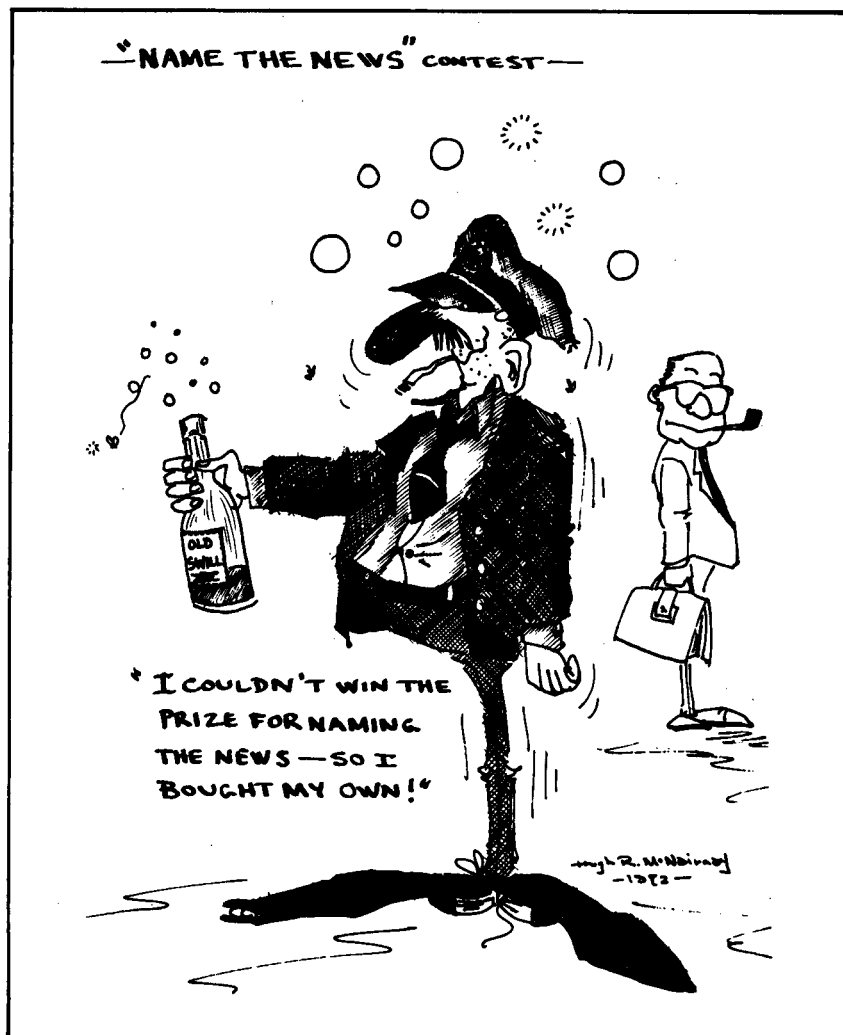
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Sounder

OCTOBER/72



Bear River Slide

On the morning of September 28, an extensive slide of downed trees, silt, soil and debris occurred on the Bear River, along the B.C. Railway right-of-way, 80 miles north-east of Hazelton. Within forty-eight hours, there were two smaller slides downstream from the first slide. The whole area has been judged unstable, and further trouble is anticipated with the spring run-off.

There were some fish spawning in the river at the time of the slides.

Fisheries crews are at the scene conducting tests to determine the extent of damage and possible remedial action.

M. Haugen

HARVEST TIME IN YUKON'S 'POT HOLES'

BY JIM BEEBE, Star reporter

The best potential farm crop in the Yukon could be rainbow trout, according to the federal Fisheries Service.

The department is just concluding what it considers a highly successful experiment in fish-farming ("aquaculture" is its more sophisticated name).

Two employees of the Fisheries Service, Don Kato and Ray Kendal, have just finished "harvesting" a crop of about 1500 skillet-sized rainbow trout in two small lakes near Tarfu on the Atlin Road.

Eighteen hundred young trout fry (about five inches long and weighing about three

ounces) were placed in the two lakes last June 8 by the Fisheries Service.

Two hundred of the trout were put in a small lake with several hundred fry of a variety of land-locked coho salmon.

The two men have found, however, that most of the salmon have died and the ones that have survived haven't grown much.

Mr. Kendal said he isn't sure why the salmon haven't fared as well as the trout, but speculated that "it could be the mineral content of the water in the lake. These fish



are very sensitive to even small differences in the amounts of minerals, like sulphur, in the water. They're not like suckers, that can live in almost anything."

He said growth of the 1600 trout placed by themselves in a larger (10 acre) lake has been "very successful".

Mr. Kendal and Mr. Kato have been weighing and measuring the fish as they catch them and find their average weight is about eight ounces and most are about a foot long.

PHENOMENAL

But in some cases, Mr. Kendal said, there has been "phenomenal growth, up to a pound and a half," in the four months the trout have been in the lakes.

If the experiment is continued next year, Mr. Kendal thought they would use bigger lakes and "lesser planting densities, because the trout did better when they were less crowded."

He doubted whether the Fisheries Service would experiment with other species of fish, because they had found the rainbows did so well.

FIRST ATTEMPT

This is the first attempt to plant fish to grow commercially in the Yukon, although "fish farms" were started three years ago in the prairie provinces.

The idea was conceived by Dr. Lionel Johnson of Winnipeg.

According to Garnett Jones, district supervisor of the Fisheries Service for the Yukon, farmers on the prairies have had encouraging results raising fish as an income supplement.

The two men have spent 10 days catching the fish from a canoe with gill nets and cleaning and freezing them.

They are using a gasoline-powered electric plant to operate a regular household freezer in the remote area.

"We catch an average of about 200 fish a day," Mr. Kendal said. "The first day we could have caught 500, but that would have been too many to clean before they went bad. We're down to about 80 a day now."

The lakes being used by the Fisheries Service are "pot-hole lakes", small spring lakes with no inlet or outlet streams for the fish to leave by.

Although there is no accurate count on the number of these small lakes, Mr. Kendal said there are a large number of them in the Whitehorse area alone.

"They just throw them in the spring and net them out before the winter," he said.

Dr. Johnson had written reports on the methods used by the prairie farmers, and the Fisheries Service plans to write up the results of their experiments in the Yukon, which will be available to anyone interested in trying to raise trout commercially.

"We used small lakes this year because we wanted to get all the fish back to determine their growth ratio," Mr. Jones said. "Doing it on a commercial basis, we would look at larger lakes."

"We wanted to do the project to see if it was possible for an individual could get a part-time income, say by taking two weeks holidays in the fall to harvest the fish," he said.

"For this experiment we brought the young fish in a freezer on a half-ton truck with an oxygen pump" (the freezer kept the water cold, not frozen). "But there was

too big a loss rate this way. Next year we could fly the fish up quickly in plastic containers."

He considered that a minimum \$100 investment in fish fry would be required for a person to start a project.

He would also need a canoe or small boat, nets and some sort of freezing facility -- and a pothole lake, or access to one.

DEEP FREEZE

"In terms of doing this for a livelihood, a person would need a big deepfreeze or a cooler in town," Mr. Jones said.

Mr. Kendal considered it would be "pretty hard to make a living the way we're doing it."

But the Fisheries' two "farmers" at Tarfu aren't experienced fishermen; they were experimenters stopping to weigh and measure and keep statistics on the fish.

Also they were using gill nets rather than sein nets.

"You could pull all the fish out of a lake that size in two days with sein nets," Mr. Jones said. "And anyone who did this regularly without sampling the fish could clean them twice as fast."

"There's not that much work involved once you're set up."

"We've heard they have some problems on the prairies with recoveries," Mr. Kendal said. "But we got almost all of our fish back."

He also pointed out that "we don't have the problem of warm water as they do on the prairies. The fish won't tolerate a water temperature over 75 degrees."

The Yukon's lakes are deeper and cooler although not as numerous as the prairie lakes.

Unfortunately, depth can also be a problem. If the lake is deep enough for the unnetted fish to survive the winter, they'll be around in the spring to eat up the young fry when they're planted.

Mr. Jones said the Fisheries Service had approached all the food stores in Whitehorse about marketing the trout and reported that most were encouraging.

"They could also be exported to southern Canada," he said.

"The Fresh Water Marketing Board buys fish from the prairie provinces and the Northwest Territories and markets them, mostly in the States. There are also private exporters who are interested."

He said estimated prices for the trout are 55 to 70 cents a pound, with about three fish weighing two pounds on the average.

Whitehorse Star Oct/72.

HOW ABOUT THAT.

Most Non-Magnetic. The most non-magnetic alloy yet discovered is 963 parts of copper to 37 parts of nickel.

Dam Salmon Rivers to Produce Energy for Whom?

Bill Sinclair and John Boland of the Economics Unit and Bill Schouwenburg of the Environmental Quality Unit, Northern Operations Branch attended an Applied Economic Workshop held Wednesday, October 11, at U.B.C. The subject under discussion was Energy Policies: A Forum On Policy Issue, a topic which should be of considerable interest to our Yukon staff and Environmental Quality regional staff. In attendance at the forum were about forty faculty members and students of U.B.C. Professor Anthony Scott chaired the forum.

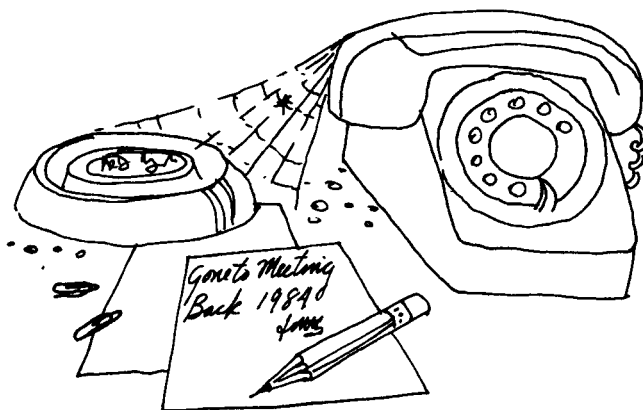
Paul Bradley, a U.B.C. economist currently making energy resource studies in Britain and an organizer of a secret conference on energy held earlier this month stated that study forecasts in the U.S. estimated a 4.2% per year increase in energy demand in the United States over the next decade. During this same period it was estimated that the supply of energy would increase at a rate of only 2.6% per annum. Professor Bradley said that this gap will be partially made up for by nuclear and thermal energy. However, the bulk of this demand would have to be filled through an increase in imported oil and natural gas, and that the United States will look to Canada for part of these needs.

Much of the discussion centered around the Mackenzie Valley gas pipeline. Economist Peter Pearse when discussing the benefits to Canada from the pipeline pointed out that using a "back of the envelope" computation, Canada's benefit from the Mackenzie Valley pipeline would amount to \$1.03 for every dollar spent. He also said that this did not take into account the effects on the environment, "all adverse", and the adverse effects on the native Indian and Eskimo populations of the North. These are the effects which are most difficult to evaluate. They must however, be included or an assessment of the pipeline is not really meaningful or valid.

Despite the almost certain economic losses from the development of the Mackenzie Valley pipeline, it was pointed out that Professor Pearse's estimates were on the optimistic rather than the pessimistic side. It was noted that Pearse used the highest possible price which could be anticipated for gas in the United States over this ten year period. The building of the pipeline would result in a one billion dollar per annum injection into the Canadian economy over four years. This would drive up the exchange rate of the Canadian dollar and result in large scale unemployment and other socially undesirable consequences.

The overall conclusions from the meeting were that Canada should be very careful to consider all the consequences before initiating a large scale expenditure on resources which ultimately will be exported outside the country. Canadian resources should be developed for the benefit of Canadians. Moreover, transportation of twenty-five trillion cubic feet (the amount estimated) of northern gas would only result in Ontario consumers paying a higher rate for northern gas than they now pay for Alberta natural gas.

W. Sinclair.



It's a new system we have. It's called M.B.M. - management by meetings

Canadians warn of tanker threat

By LARRY STILL
Sun Staff Reporter

SEATTLE — The United States oil industry is prepared to risk an ecological disaster to bridge a widening energy gap and thus maintain a healthy economy.

That harsh reality emerged here Saturday during a seminar on the proposed 800-mile Trans-Alaska pipeline, in which oil from Prudhoe Bay will be piped to Valdez and then shipped to U.S. West Coast refineries.

Speakers at the seminar, part of the sixth annual Commercial Fish Exposition, unintentionally painted a picture in which the provision of oil for the U.S. could result in the creation of an ecological time-bomb.

By 1980, the earliest probable year of the Alaska operation's full operation, 41 giant tankers will be used to transport two million barrels of crude oil each day from Valdez.

E. L. Patton, president of the Alyeska Pipeline Service Co., a consortium of seven major oil companies, bluntly told the seminar that "tankers are here to stay."

Patton, whose consortium will construct, operate and maintain the pipeline system, tried to minimize the risks with the aid of marine accident statistics.

"I'd like to point out that tankers are not the number one maritime safety problem," he said. "The 1970 West Coast statistics show that of the total number of oil spills from ships in that year, 10.3 per cent were related to tankers."

But in spite of the rosy statistics, Patton acknowledged that 10 oil companies have already formed a private consortium — Washington State Oil Spill Cooperative — whose key role is to develop oil-spill clean-up equipment.

Robert E. McLaren, western regional director of the Canadian government's Environmental Protection Service, warned that Canada is no longer immune to the devastating effects of oil spills.

He said that no month

passed in 1971 without a spill, and scientists now estimate that 10 million metric tons of oil are spilled into the ocean each year.

"The grounding of the Arrow tanker (off the Nova Scotia coast) told us we are not immune," he said. "And now the Alaska pipeline in conjunction with large tankers passing through the Strait of Juan de Fuca has made our shores even more vulnerable."

"The wind and the tidal flow make us very vulnerable to a spill. And there is a very slow rate of dispersal."

Referring to "the rich and varied nature of sea life in Canadian waters," McLaren said species such as the sea otter and sea lion are already threatened.

"One more hazard could result in the extinction of any one of these creatures," McLaren warned.

After the seminar, in an interview with The Sun, Doolittle and E. A. Weymouth, northwest representative of the Western Oil and Gas Association, both stressed that Canadians will have to live with the movement of Alaskan oil.

The 200 fishermen at the seminar maintained a stony silence even during the brief question period.

Weymouth said there are at least 10 billion barrels of oil in Alaska's North Slope reserves, which he called vital to energy needs in the western U.S.

He said three to four tankers now carry 570,000 barrels of crude oil along the entire length of the U.S. East Coast in an operation designed to supply Canadian refineries.

"That oil is unloaded at Portland, Me., where it is transported by pipeline to oil refineries in Montreal," he said. "Our Canadian critics rarely mention that."

VAN. SUN. OCT/72.

OLD CROW NEWS

HERE ARE THE NEWS

August 29, Tuesday - A mail arrived and on board is Mr. and Mrs. Keast they arrived back to teach the kids for one year. We all like to see them back and teach our kids. May God be with them and good health.

This year we had a new teacher came from Ross River. As I know Old Crow is very quite town so when ever stranger come around they sure like the place very much.

August 31 - The Great North Ward arrived but no passenger for Old Crow.

September 1 - First the fishers were here two years and this years they all friendly with everybody. They figure to go so they put up the party for everybody. Kids and all. I think Jim and his wife did a very nice work with their crew before they left. We all will remember them in our prayer every day. This fisher are good people when they test the fish and after finish they give

it out to people. After party and they had a dance til 3:00 A.M. They are packing for one week and they left on September the 4 evening. The same morning all the students went back to Whitehorse for school.

September 3, Sunday - Abraham Peter and Charlie Peter r. they went up river to hunt but no luck and they came back didn't any. The wild life crew said caribou is coming close and they said people might see caribou anytime but no sign of caribou yet. Old Crow is busy day everybody is working. Peter Benjamin is making new house. Johnny Abel is putting the foundation up long ago and I think he will finish his home before snow comes.

The trailor is just setting beside the rector. I wonder they will work on it or not. Before cold weather come they could easily put by the rector. Morning and night it is cold in Old Crow.

End the news.

Edith Josie

WHITEHORSE STAR SEPT/72.

The Thrill Has Gone

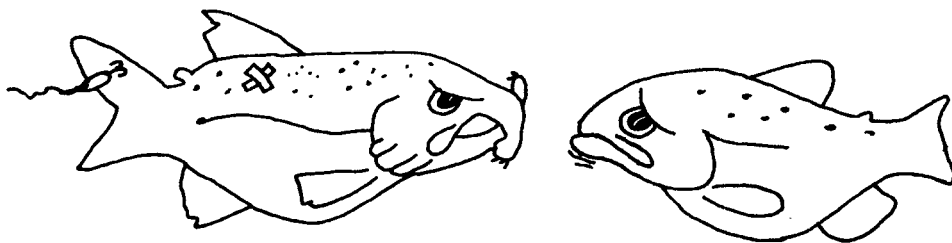
The North has had a newspaper for seven months. The South has had a paper since August. Is that any reason for the South to contribute more (and more eagerly), than the North?

A form letter sent to most fishery officers in the north and south asking for articles for THE SOUNDER produced gratifying results from the south. The north remained silent.

We had thought that the south needed a "pep talk", but it seems we were mistaken.

Perhaps some friendly rivalry between the north and south is in order. Which will contribute the most and best each month?

M. Haugen.



Gravel in Bed, Yes, Cracker Crumbs in Bed, No

Managers Report

Here I am trying to beat the deadline again. You've probably all read or heard a lot about the peculiar temperament and inhumanity of editors faced with deadlines -- you'd better believe it!

Since last month the Branch headquarters group has been putting a lot of effort and attention to developing objectives. We are anxious to get some focus for our efforts in 1974-75 and 1973-74. In addition, the Region has had meetings with Research and Development (ex F.R.B.) to develop common regional objectives for the Fisheries Service. The prospects for developing common objectives look good. The better defined our Regional objectives, the easier it will be to develop objectives to the sub-district level. The present thinking is geared to a Branch meeting in April or early May, 1973.

In the meantime, plans for a Salmon Expectations meeting at Prince Rupert on November 28 and 29 are progressing favourably. This meeting will be extended by one day in order to provide opportunity for discussion of a number of other matters: oil pollution contingency plans; Resource Benefit Units; enforcement problems; boat inspection; forestry guidelines; etc.

I had an opportunity to visit the upper Skeena watershed on October 9 and 10. Our party flew the Bear - Sustat - upper Skeena - Kluatantan - Klappan River systems. What magnificent country at the headwaters of the Skeena! Vast meadowlands covering hundreds of acres. Herds of caribou and moose, like cattle in pastures. These animals over-winter here. In my opinion, it should be declared a game preserve.

R. MacLeod

Indian fishermen get 500 salmon

Sun Staff Reporter

TOFINO—A dispute over how many sockeye salmon Indians should be allowed to take from Tofino Inlet under their native rights was settled Saturday after several meetings with fisheries department officials.

An Indian-manned seiner was finally allowed to take a mixture of 500 sockeye and coho while irate commercial fishermen stood by.

The Indians, not allowed to fish the inlet because of a total ban, were initially given a permit for 500 sockeye after meeting with Fisheries Minister Jack Davis earlier in the week.

Originally the Indians had demanded 150 fish per family but this was turned down because the total "would have run into the thousands," and possibly damage the Kennedy River sockeye run, which goes up Tofino Inlet, said Dick Crouter, manager of the southern B.C. operations for the fisheries department.

While the Indians fished Saturday, seven trollers manned by white commercial fishermen were present as a protest. Four Indian-manned trollers and a fisheries department patrol boat were also in the area.

The mixed catch was 700 coho and sockeye. The Indians became upset when officials forced them to dump 200, leaving them with 200 sockeye and 300 coho.

Crouter said they later were satisfied with the situation.

But Doug Arnett, a spokesman for 100 commercial fishermen based in Tofino, said they were still upset that the Indians were allowed to fish when whites were forbidden.

He said the Ahousat Indians offered the Tofino Indians 1,000 dog salmon to help out, but these were refused. The situation became political, he said.

Local fisheries officer Nick Seymour, who recommended the total ban on fishing, handed in his resignation but has agreed to reconsider, Crouter said.

He said Seymour mailed his resignation before the department had made its estimate of the number of sockeye in the Kennedy run and determined it was safe for the Indians to take 500.

Fish hatchery set for Island stream

By LEE STRAIGHT

Tenders have been called for construction of the second fish hatchery to be built on the Strait of Georgia by the fisheries service of the federal department of the environment.

To be known as the Quinsam River Hatchery, it will be located on a tributary of the Quinsam, Cold Creek, southwest of the municipality of Campbell River. The Quinsam, in turn, is a tributary of the Campbell.

Prospective bidders are invited by George Neilsen, the fisheries service engineer in charge of the project, to inspect the site Oct. 12 and 13.

Deadline for tenders will be January and the 18-month project is to start by April and be completed by September, 1974.

Products of the hatchery will be coho and chinook salmon and steelhead trout. It will be similar to the new Capilano hatchery that opened this year, but with local variations associated with nearby rivers and production potential, said Neilsen.

Neilsen said it will cost "somewhat" more than the \$3

million it cost to build the Capilano plant. The Quinsam plant will have five more than Capilano's 10 rearing ponds and one more than the Capilano's two adult holding ponds.

Anticipated production by the new hatchery is 3,750,000 coho fry for stocking adjacent streams, now impassable to mature coho but capable of rearing them to down-stream migrating size as one-year-old "smolts."

Also, 1,850,000 coho will be reared in the hatchery to smolt size for release into the Quinsam system itself. It will include a special stock of fish from the famous Campbell River tyee chinooks, the older and larger chinooks.

Another 20,000 steelhead trout smolts will be reared from eggs to be taken from adults of the normal Quinsam run of fish.

The engineer told The Sun that the expected return of adult fish is 125,000 hatchery cohoes, 60,000 cohoes from the transplants to nearby rivers, 27,000 adult chinooks and 1,800 steelhead.

Biologist in charge of the project is Fred Fraser, of the Pacific area headquarters in Vancouver.

Letters To The Editor

Editor:

Re your letter of September 22nd received in today's mail at Parksville. Not very much newsworthy info from Parksville-Qualicum and environs other than the "Red Tide" phenomenon which produced a "ground swell" panic reaction last summer and still causes a "Red Tide Ripple" in this salt water spa area of Vancouver Island's East Coast.

The local tourist industry (i.e. "main" local activity) regarded the sinister and mysterious "red tide" as a crisis which would have had a very serious economic impact if the organism had proved to be *Gonyaulax catenella* (which causes paralytic shellfish poisoning) rather than *Noctiluca scintillans* (i.e. a relatively harmless night phosphorescent dinoflagellate) which it closely resembles.

I am enclosing a c.c. of the routine weekly sport fish report for the period involved and also the editorial page of the local weekly newspaper with reference to Editor Peter Caley's remarks in "Bouquets and Brick-Bats". As you can see District 3 staff hit the "Bouquet" column and I might add that all concerned are mighty pleased that it was not "wreaths".

I like the name you have selected for the paper. The "SOUNDER" is very appropriate I feel. I was going to suggest "Fish and Chips" based on the philosophy that we are all concerned with fish and many of us feel that we are not getting a large enough helping of "chips" (esp. blue ones) in this time of rapid inflation.

Regards and keep up the good work. Cheers,

Andy Skipper.

Bouquets And Brickbats by PETER CALEY

What appeared to be the dreaded Red Tide conditions in local waters last week turned out to be a completely harmless organism rising from the kelp beds, due to unusually high water temperatures.

But the way the matter was handled by the Nanaimo branch of the environment department is deserving of a bouquet. Although swamped with telephone calls from alarmed residents even as early as 5:00 a.m. Thursday, the fisheries service lost no time in getting out on the job.

Although almost completely certain that the cause was simply a harmless phosphorous organism, the department commenced taking samples and recording water temperatures.

At the same time, other members contacted the local newspaper and tourist offices with their interim opinion,

conscious that the area is highly dependent on tourist traffic and aware that alarmed tourists might take off for bluer waters. To be so reassured was a comfort to all of us.

The next day, the tests were completed and the department went through the same routine again, advising the media and tourist offices that all was well. For this kind of thoughtful service, we, as a community, owe those men a vote of thanks.

Now, if our provincial government would study this excellent example of public service and communication, we just might be less alarmed by political moves which appear to be equally mysterious and possibly toxic.

QUALICUM BEACH PROGRESS AUG/72

Editor:

From our retirement isolation, Mrs. Summers and I send greetings to all in Pacific Region and present our schedule for the winter of 1972:

Departure date - now

Mode of Travel - Camper unit

Destination - Southern California and Mexico

Return date - April, 1973 (maybe).

While basking in the sun in Manzanilla, Mexico, sipping Bacardi and ogling bikinis, we will pause briefly to wish one and all a grand Xmas and the very best in 1973. We may muster enough physical effort to send a card for the bulletin board from time to time, but don't bet on it.

Adios Amigos,

Doris & John Summers.

Editor:

With the longest continuous net fishery on the B. C. coast, and with a man short on my staff, the things I have not done this summer include Annual Leave and Publishing newspapers.

I find your last two paragraphs insulting to field personnel generally, and to myself particularly in the final paragraph, and demand an apology. I have not yet seen a copy of any type of NEWS, NOB or otherwise, nor has this office been asked for contributions previously.

You should bear in mind the axiom, "Those that can, do; those that can't, write."

E. T. Kasmer

Editor's Note:

The letter to which Mr. Kasmer refers was a letter sent to most Fishery Officers in the North and South. The body of the letter reads:

Have you enjoyed the NOB NEWS lately?

The NOB NEWS' last edition was published in August, 1972. September starts a new era with the NEWS being a joint effort between the Northern and Southern Operations Branches.

The idea behind the NEWS is to keep people informed of happenings -- big and small -- in field and office, and to allow the expression of individual views.

Unfortunately, if left up to the field personnel the NEWS would be blank sheets of paper.

We haven't received any newspaper clippings, photos or articles from _____. What is happening there? If nothing is happening, what are you doing there?

* * *

We are sorry if anyone took the last paragraph of our form letter personally.

The purpose of the letter was to stimulate more participation in the newspaper from field personnel.

We wish to thank all who replied to our letter, and we hope you will continue to contribute in the future.

Editor.

Editor:

I was thinking that perhaps the "Sounder" may be an ideal conveyance to carry the news of how it is and how it came about. So, suppose you run an information column, and for a starter elucidate to all concerned just what (where fish are concerned) is meant by "Indian Rights". Who instituted these "Rights" and what legal instances have validated them ...

E.W. Armstrong.

Good idea. We'll try to cover this topic in future issues. Will our Indian Rights experts please come forth?

Editor.

Hot Flashes From Tofino

Editor:

Many thanks for your letter of the 22nd of September. Unfortunately I have not had the opportunity to answer it before for various reasons that would be contravening the Fifth Amendment should I state them. However, I feel that I could best answer your letter starting from the end and not the beginning. The great English Statesman, Winston Churchill once said "This is not the beginning of the end but it may well be the end of the beginning". So I will start from the end.

What am I doing here? Now here, clearly, is a controversial point. One can say that I must be here to receive my salary cheque; others could say, possibly with venom, "THAT is a damned good question". I have heard some say that I will possibly become Mayor. Others have wished me in a far hotter climate than Mexico. Again, in a half joking mood it has been said that I am here to get enough ill-gotten gains to GO to Mexico. Others, with a jaundiced eye have intimated that without me here, my office chair seat would get cold. I, of course, modestly claim that I am here because if I were not, the entire local Environmental Structure would collapse. I can only say to you that you must, cum grane salis, make your own choice. I would strongly urge you to accept my own views as clearly they are not biased.

What is happening there? And if nothing???????

Now, of course, one must realise that with or without me, people have to live, eat, sleep, (some have the beastly habit of DRINKING!). People drive cars - yes, we have some here too. Some prang them, others dent. People die, others are born. Other things happen en el silencio de la noche that I would rather not mention. Some people earn money, others are on welfare. (Some rather not very nice people suggest that I am to be included in the latter group). People get up, people go to bed. The younger couples after going to sorry, I am rambling. Some smoke, some are PURE. Others even chew snoose. So you see, SOMETHING is happening here. It must, by recourse to common reason.

Now, news clippings or photographs from Tofino. I will certainly send you news clippings. One that I have here is most interesting. I thought I had filed it but I am in such a mess with my files that I have mislaid the filing cabinet so I will have to use my memory. Let's see now. "Mr. and Mrs. Snodgrass had a visit from their second cousin once removed over the weekend. Mr. Czlyrz, the second cousin, lives at Long Beach". Now, THAT is news. (I may say that Mr. Czlyrz was booted out of the beer parlour for smashing a bottle over the head of Charle Qzxaryzc, the Scottish bartender). Photographs. Ah! This a different matter. I took two spools on Wreck Bay and they were seized by the Censor. They were most interesting as they showed..... there I go again, rambling. So the photos have been shot down. In flames, yet.

And now, of course, we come to individual views. Here, of course, we must realize that, for a man of my age, they are quite diversified. They range from religion through politics to views on mythology. I hardly feel that in so short a letter I can cover them. I have strong views as to why I am not Regional Director or at least Head of a Branch. There again, my views might not coincide with the present Regional Director or Heads of Branches. I am not slighted however as I feel rather sorry for those that have not as yet come to the realisation that I am brilliant. I am sure you must at once perceive that I MUST be brilliant to be stationed in Tofino. I remember that, years ago, when there was no road to Tofino and coal oil lamps were used as the Hydro was not here, that Selection Boards had to fight off applicants for the position of Fishery Officer, Clayquot Sound. Tofino is in Clayquot Sound, you

know. Not right in it, as it were, but on ground which is so-called "dry ground". This can hardly be the case as we get an average rainfall of over 140 inches. But still, to the views. (Damn it, this candle is flickering as the power is off again). I get a good view from my window (office, that is) during the Tourist Season. Some of the sights are..... there goes the candle again. Oh yes, we had about 450,000 tourists here this year. Long Beach, you know. Seaweed, sand, driftwood, you know. Very bracing. Parties on the beach, hot-pants etc. etc. Bracing, as I said. Keep getting off the subject of my VIEWS. Still, who wants to hear mine. Obviously biased, they would say.

So there we are. Hope this finds you as it leaves me, as they used to say. How that is, God alone knows.

Cheers and all the very best and as things start to happen, I will not forget you with something hot from the Fisheries Service Press at Tofino (on the West Coast of Vancouver Island, you know).

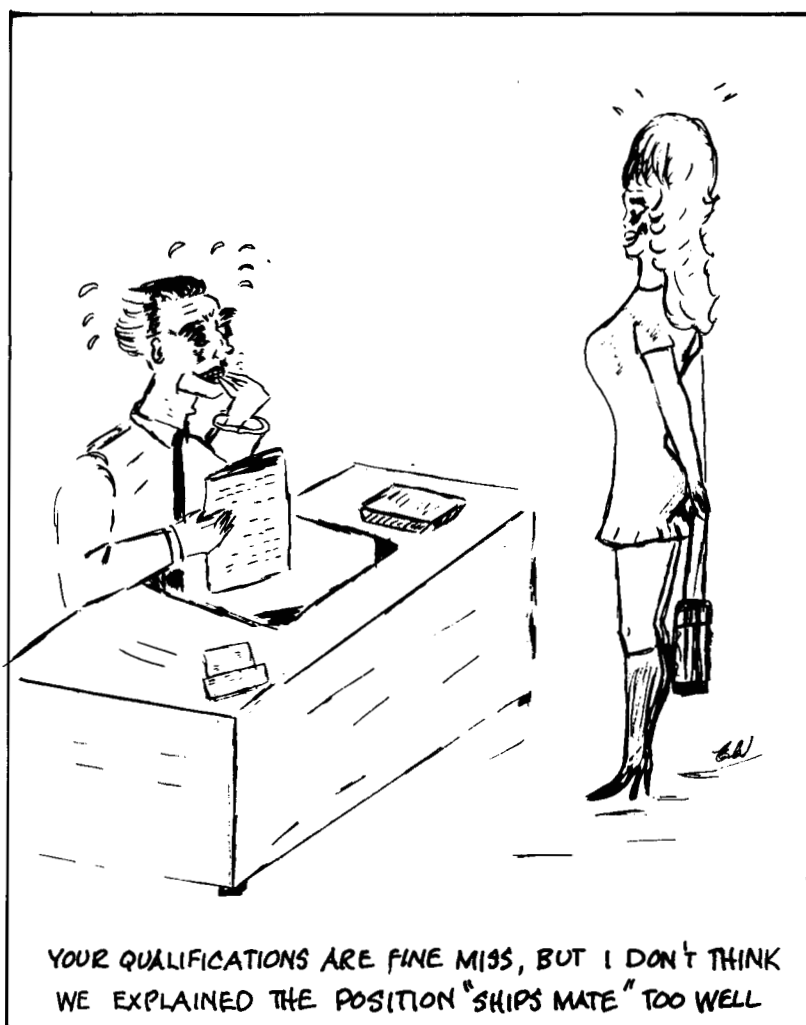
Keep smiling,

Nick Seymour.

THE REC & CON.

(Shuffle Shuffle)

MORNIN'
HOWZITGOIN?
OHNODTOBAD
RIVERSHIGHANDURDYHUH
NOTOODURDY
ANYTHINMOVIN?
FEWSHOWN
(Cast)
NOTHIN?
LOSTABIGUN
HOWCUM?
STRUCKTOOSOON
(Cast)
WHACHUSEN?
ROE
GOODPOISONFOREM
YEA
(Cast)
GOTTALICENCE?
YUP
CANIHAVALOOK?
SURE
KINDATUFFLOOKIN
YEAIFELLINACOPLATIMES
COLDHUH?
YEAIGOTONETUSDAY
HENORCOCK?
BUCK
CLEAN?
BAROSILVER
GOTTAGO
YEA
LOSTALUCK
HANKS
SEeya
(Cast)
(Shuffle Shuffle)
MORNIN'
HOWZITGOIN
...



HOW ABOUT THAT.

Greatest Flow. The greatest flow of any river in the world is that of the Amazon, which discharges an average of 4,200,000 cubic feet of water per second into the Atlantic Ocean, rising to more than 7,000,000 "cusecs" in full flood.

Editor:

Thought you might be interested in this excerpt from a letter written by District Supervisor G. S. Reade regarding two "Young", "Energetic", inspectors (Fishery Officers alias of that era).

Thought you might insert it in the next publication of "Sounder" under headline "Two Mossbacks still energetic but not so "young" anymore."

Regards,

L. S. Freeman

P.S. Keith Elliot is now F.O. at Steveston, B. C., Vic Giraud is District Supervisor at Prince Rupert.

The letter was addressed to a Dr. Foerster at the Pacific Biological Station in Nanaimo on December 24, 1948. The letter reads in part:

"You are no doubt aware that in May, 1947 there was an increase in our staff on the Skeena River. Two young energetic inspectors, Inspector Elliott for the Babine-Morice Area, and Inspector Giraud for the Terrace-Lakelse Area, were appointed.

"The work of these officers and the four guardians and patrolmen under them is well known to the staff of the Investigation, and all the complimentary reports I have received on their work have come from that staff, especially Dr. Pritchard."

High Fuel Bill ?

Are you interested in saving money on fuel bills this winter? We have recently come across a pamphlet called "7 Ways to Reduce Fuel Consumption in Household Heating ... through Energy Conservation". Write to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, and enclose 25¢.

DID YOU KNOW?

Fastest Breeder. The fastest breeder is the golden hamster (*Mesocricetus auratus*), native to Syria, Turkey and the Balkans. By dint of a gestation period of 16 days and intervals between litters as short as 18 days, a female could theoretically produce 100,000 descendants in a year, compared with barely 1,000 by a rabbit (*Oryctolagus cuniculus*).

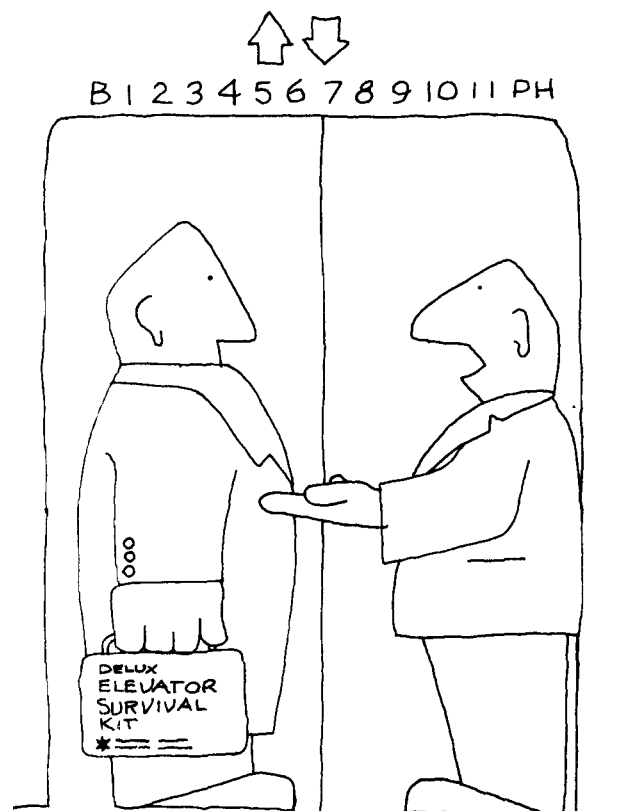
Inspection Tour

Some years ago I was on duty at Rivers Inlet. One evening during a fishing closure, 3 or 4 crew members, another Fishery Officer and myself were aboard a patrol vessel tied up at Goose Bay cannery. Two short, elderly gillnet fishermen came aboard. They walked around the deck inspecting everything carefully, then came to the door of the main cabin, looked over its occupants for a few moments without saying a word, then turned and left the vessel.

As they stepped onto the float, one said to the other in a loud voice, "She had a haywire crew on her last year too."

G. T. McIndoe

Sandy Argue, Secretary-Treasurer of the Pacific Fishery Biologists asks for ideas for lead-off keynote speakers, panel topics and possible panel leaders. The meeting will be held in March, 1973.



IF EVERYTHING ELSE FAILS JACK JUST TAKE THIS LITTLE PILL, YOU WON'T FEEL A THING...

Slim Creek Investigations



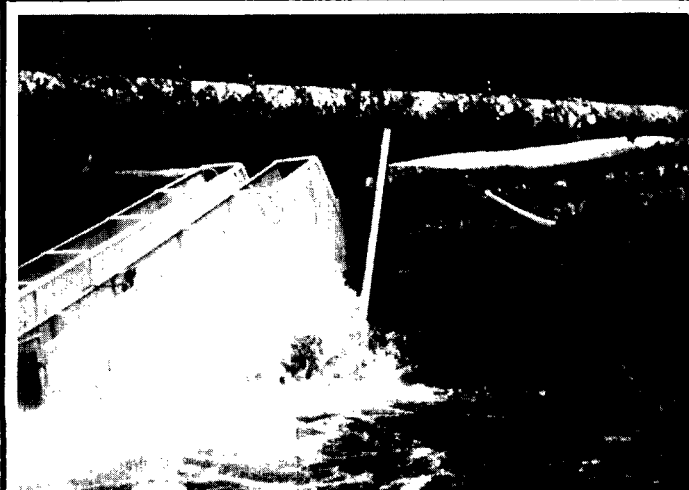
Rosanne Creek, a tributary of Centennial Creek located 50 miles east of Prince George. The unlogged area at the top of the picture contains a control section. The logged downstream area was harvested in the summer of 1972.

Interior forest harvesting is vastly increasing both in amount and intensity. Unfortunately, only limited information is available regarding the effects of interior logging on the aquatic environment. Information from coastal studies of fish-forest problems may not be directly applicable to interior watersheds owing to important differences in soils, precipitation, runoff, and forest harvesting methods.

In order to assess interior logging effects and associated effective protective measures, a co-operative investigation was initiated in the Prince George area involving Northwood Pulp Ltd., Fisheries Service, Fish and Wildlife Branch and the B.C. Forest Service.

The study has been underway since 1971 and involves the measurement of effects of present access logging and road building methods on physical, chemical, and biological characteristics of Slim Creek tributary streams and of Tumuch Lake. The investigation was designed to be short-term (approximately three years' duration), utilizing unlogged watersheds and upstream areas as controls.

Intensive measurements were undertaken at one main tributary - Centennial Creek - from spring break-up to fall freeze-up (1972) to ascertain effects on stream invertebrates, stocked fish populations, planted eggs, in addition to measurements of nutrients, temperature, dissolved oxygen, gravel composition, suspended sediment, and soil debris movement. Upon completion of silvicultural treatments (burning and scarification in 1973) these results will be summarized in technical report form.



Fish counting fences located above and below the logged area where emigration rates are assessed

Monthly sampling (spring to fall) of Tumuch Lake and its control lake will continue for two more years prior to reporting the results.

It is anticipated that this study will greatly assist in resolving fish-forest conflicts in many interior areas.

P. Slaney
M. Brownlee
T. Chamberlain

Editor's Note: Co-author P. Slaney will be leaving the Department in early November for a position in the Recreation and Conservation Department of British Columbia. He will continue his role at the Slim Creek investigations as part of a joint effort between Governments. After a year with Fisheries we only can only wish you the best of luck for the future, Pat.

Law Enforcement in the Pacific Region.

Each year in Pacific Region, Fishery Officers lay approximately 500 charges under the B. C. Fishery Regulations, the Fisheries Act or the Coastal Fisheries Protection Act. Most charges are laid against individuals, relatively few against companies. Individuals charged may be commercial fishermen, sports fishermen, offenders in connection with the Indian food fishery, polluters or those guilty of such offences as shooting or stoning salmon on the spawning grounds, etc.

The success ratio is considered to be quite satisfactory. For example, during the year 1971/72 a total of 488 charges were laid, with convictions being obtained in over 90% of the cases. Twenty-two cases were dismissed, 15 were withdrawn, 8 had Not Guilty verdicts, and 2 Stays of Prosecution were entered by the Crown.

Were we to have 100% "success" in our cases, it might indicate that Officers were usurping the Judge's prerogative by pre-judging all cases themselves, and only taking into court the ones they were sure to win. On the other hand, the over 9 to 1 success ratio would seem to bear out that our men are not wasting their efforts on borderline offences.

A number of cases were withdrawn because of a loophole in the Regulations, which has since been plugged. Dismissals or Not Guilty verdicts were rendered wherever the defendant was able to create a reasonable doubt in the Judge's mind as to what had actually occurred during an alleged offence. At

times, the reasons for doubt can be somewhat tenuous, and some Judges appear to be more open in this regard than others. Be that as it may, it is the Judge's court; he is in complete charge of it, and he dispenses justice as he sees fit.

While there is provision for the Crown to appeal a decision, it is seldom used by our Department.

Penalties in the year 1971/72 ranged from suspended sentences through to \$1000 fines under the general penalty section, and up to \$5000 under the pollution section of the Act. In the case of two old offenders in the "fish running" trade, there was a mandatory 30 day jail sentence, plus a \$250 fine. Such jail sentences without option of a fine are not meted out in Fisheries cases except in particularly flagrant ones.

Fishery Officers are aware that the prevention of offences is part of their role, and spend some time educating fishermen and others on the existing regulations, special fishing closures, etc. Further, Officers are in a position to exercise some discretion as to whether or not a charge is laid under certain circumstances. At times, when dealing with persons who have committed minor infractions, it is possible to make a friend for the Department rather than an enemy.

George McIndoe, Chief,
Regulations Unit.

R.D. 104 Fishes Burrard Inlet

I recently spent half a day on the R.D. 104, observing the seining operations in Burrard Inlet. Leaving False Creek dock, we steamed (?) around Stanley Park (sighting a seal). We made a set at Third Beach to "wet the net". The net profit was one juvenile sand-lance and one starfish.

Then I took over the helm, navigating us around Stanley Park ("Just steer towards those apartment buildings", said Bob Armstrong), while the men repaired some part of the hydraulic drum controls.

We anchored near H.M.C.S. Discovery for lunch. Bud Graham, the Chef of the Day, prepared some clam chowder and peanut butter sandwiches, and earned the compliments of the crew.

The second set was made about 100' from the Air West dock, in Coal Harbour. The net recovered hundreds of smelt, a few herring, 2 chinook smolts, some stickleback and two old bottles.

Our third set, about 200 feet west of the Bayshore Inn Tower consisted of mostly smelt, but it also brought up a flounder, 2 large crabs and 6 old beer bottles.

The garbage brought up may at first seem discouraging, but there is something significant in the fact that all the bottles were old - "antiques". Maybe some people really are becoming aware of their environment, and are refusing to dump refuse in the water.

The present crew of the R.D. 104 doesn't dump any garbage into the water either. "Skipper" Bob Armstrong feels that the Department of the Environment must set an example. He mentioned at the same time that most government wharves and marine park docks don't have dockside garbage cans.

This crew has spent about 2 weeks over two months test fishing in Burrard Inlet as part of a program to study the effects that a "Third Crossing" would have on the marine life of Burrard Inlet.

M. Haugen

Fish Expo

Fish Expo is an annual event, held alternating years in Boston or Seattle, organized and sponsored by commercial fishermen and businesses catering to them. I attended the third day of the conference, held this year in Seattle.

Seminars covered a wide range of topics, from "the New Federal (U.S.) Communications" to "Utilization of Fish and Shellfish Waste".

Some interesting points were emphasized that I think are worth mentioning.

- (1) Fishermen should organize to protect their interests;
- (2) Statistics and research by biologists are bunk;
- (3) Russians and other foreign fleets (Canadian?) are depleting the U.S. fish stocks;
- (4) Young boat crews these days don't know how to do anything.

Besides seminars, there was a large display area, on the order of the P.N.E. Home Show. There were displays by net makers, radio and sonar manufacturers, commercial fishing magazines, and by various (U.S.) government fisheries agencies.

Judging by the attendance at the morning seminars, the convention attracted some 500 guests.

M. Haugen.

The Week That Was

Did you know that October 8th-14th was National Environment Week? Neither did we. We discovered the fact quite by accident, in a small ad hidden in one corner of a page in the Sports Section of the Vancouver Sun on October 11.

Even Egg Week is better publicized.

Of four schools surveyed in the greater Vancouver area, three didn't know it was Environment week, and none had any special events slated for the week. Two mentioned that they would have welcomed a speaker. Persons in our own Public Information Branch weren't sure exactly which week was Environment week.

Our chance to toot our horn came and went.

Potential For Small Blackcod

The blackcod, (Anoplopoma fimbria), a member of the skilfish family (not a true cod), inhabits the waters of the North Pacific Ocean. Active fisheries for this species occur from California to Alaska.

The adults of the blackcod species inhabit deeper waters than most other groundfish, between 70 and 250 fathoms. Large schools of immature fish (up to 24" in length) inhabit the shallower waters, close to land and on the fishing banks.

Prior to July 15, 1972, the Canadian Fisheries Service had enforced a minimum size limit of 2½ pounds dressed, heads off, for the purpose of protecting immature stocks. On that date, it was decided to waive the limit for a period of 3 months to assess the effects of increased catch of small fish. (Those less than 5 pounds dressed). Factors influencing this decision were:

- (1) Oregon State had rescinded their size limit on the grounds that it had no biological basis;
- (2) Fisheries Research Board scientists concurred with Oregon's conclusions;
- (3) The large stocks of small blackcod available in coastal waters;
- (4) A strong market demand;
- (5) There is not necessarily any benefit to Canada in allowing the fish to grow to a larger size before harvesting, as they migrate to deep water where they become accessible to foreign fishermen.
- (6) Increased incidence of mercury contamination in older fish.

Blackcod are marketed mainly in smoked form because of the strong flavour of the flesh. Small blackcod (less than five pounds in weight) are prepared mainly in the fillet form to be smoked.

The greatest market for blackcod is in Western Canada. Restaurants, fish specialty stores, and supermarkets constitute the main retail market outlets. The large fish have been and are at present in good demand. However, it appears that in many instances, the fillet is substituting for the large blackcod when it is not available. The most success has been experienced with the supermarket trade.

RECOMMENDATIONS

It is recommended that the experimental period for removal of the minimum size limit be extended for another nine months, during which time every effort should be made to determine the effects on the resource. At the end of this time period the consumer reception to small blackcod fillets shall be more apparent.

If, at any time during the nine-month period, fishing effort begins to increase substantially from its present level, then the size limit should be reintroduced to safeguard the stocks.

- from a report by D.B. McEachern and R.D. Humphreys, "The Initial Effects of the Temporary Removal of the Minimum Blackcod Size Limit".

B.Q.- M.B.O.

It's been two months since we posed the question: "What happened to the report on the Big Qualicum M.B.O. "pep rally" held months ago ... have we received it already, or can't anyone remember what happened?"

No answer yet, folks.

FILLER

It has been said that insanity is hereditary....Parents get it from their children.



Cooperation

A joint project was undertaken in Sakinaw Lake this past season, involving the provincial Fish and Wildlife Officer, Pat Mulligan, and Fisheries Service personnel out of Madeira Park. Over the past twenty years or so, debris had accumulated at the outflow of the lake which had covered an extensive gravel bed previously used by spawning chum, coho, and perhaps sockeye. A "Timberjack" was hired by the Department, some funds were allocated by the Fish and Wildlife people, and the mess was hauled out.

The work was originally started in the winter of 1970, when the Department hired a crew of fishermen to do some clearing at the lower end of the outflow. More work followed on a volunteer basis from the Gibsons Wildlife Club. This same club is volunteering to finish the massive cleanup job, on both the bottom of the stream and the lake bed, and then burning the debris.

Our hats are off to the provincial people, and the Wildlife Club for their excellent work. This project is a fine example of the cooperation we are receiving on the Sechelt Peninsula.

R. Kraft.

New fish pact vital—Davis

By FRED CURTIN

An entirely new fish-sharing agreement must be worked out between Canada and the U.S. for west coast waters, Fisheries Minister Jack Davis said Tuesday.

He said the new treaty should cover all rivers and all species of salmon and be flexible enough to ensure that the country which invests the most in its rivers gets the biggest payoff.

Davis said the present International Pacific Salmon

Fisheries treaty, which covers pink and sockeye salmon in the Fraser River, was fine for the 1930s but is unacceptable today.

This treaty provides that the two countries share in both capital construction costs in rehabilitating salmon runs in the river and the annual catch of the two species of fish.

"I don't want any more U.S. dollars coming up here for permanent developments in our rivers," said Davis. "From now on the policy will

be Canadian dollars for Canadian development."

Davis said he does not think that the U.S. should be entitled to any more than 25 per cent of the Fraser River runs of pink and sockeye salmon.

"The U.S. had us over a barrel in the 1930s when we were faced with a big investment of building the Hell's Gate fishways. They agreed to share the cost and share the fish."

However, in the years that followed the Canadian government has invested millions of dollars in developing fisheries in other B.C. rivers and these rehabilitated runs are now being picked off by the U.S. fleet, Davis said.

Davis says this is especially so in northern B.C. where Alaskan fishermen intercept runs to the Nass and Skeena rivers. "The country that looks after its rivers should be entitled to harvest its fish."

However, Davis admitted the U.S. has built up a number of commercial runs through its hatchery program and that many of these fish are being caught by B.C. trawlers off the west coast of Vancouver Island.

"This is also something that should be worked out in the new treaty. The Americans are entitled to equal protection for these runs."

PROVINCE OCT/72

Fraser fish row 'a new pig war'

By DAVE ABLETT
Sun Washington Bureau

WASHINGTON — Washington state politicians reacted sharply today to Canadian Fisheries Minister Jack Davis' demand that the Canada-U.S. salmon treaty be renegotiated to cut the U.S. share of the catch.

A spokesman for Senator Warren Magnuson told The Sun: "The senator will have no part in any change in that treaty."

Congressman Lloyd Meeds, who represents the Bellingham area, called Davis' salmon treaty demand "a red herring."

Congressman Thomas Kelly of Seattle, who specializes in fisheries questions, said the

U.S. probably would not sign a treaty reducing the U.S. share of the catch and U.S. fishermen might not accept new limits on the catch anyway.

One congressional aide said: "Oh, no — here comes another pig war."

The pig war was a 19th century boundary dispute between the U.S. and Britain over who owned the San Juan Islands in which the only casualty was one pig, a resident of one of the islands.

The U.S. got the islands and the pig got a statue.

SUN OCT/72

the LATE SPAWNERS



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WE'D BE MOST HAPPY TO RECEIVE: Clippings from local newspapers,
(send date of issue, name of paper,
town), articles written by fish-
eries staff (you), ideas, con-
structive criticism.

ADDRESS CORRESPONDENCE TO:

M. Haugen,
Technician,
Department of the Environment,
Fisheries Service,
1090 West Pender Street,
Vancouver 1, B.C.



SERVING THE PACIFIC REGION OF THE FISHERIES SERVICE NOVEMBER 1972



Packers moving through Nitinat Narrows

REMEMBER THE NITINAT BACK IN 72 ?

One often hears the supposed fishermen's tales that "such and such" river produced umpteen zillion salmon. During the past month, one of these tales came true at Nitinat Lake, when an abnormally large return of chum occurred. It was realized in early October that a substantial number of chum salmon were returning to Nitinat Lake and that stocks were strong enough for the first fishery in Nitinat since 1961.

Then on October 13, the anoxic (i.e. no oxygen present) layer in Nitinat Lake that is normally below a depth of 60 feet seiched, or tipped, resulting in the oxygen depleted and high hydrogen sulfide layer coming to the surface at the head of the lake. This caused a minor fish kill and forced all the chums back down the lake into the commercial fishing area and for this reason the opening of the fishery was postponed until October 23.

Anticipating a large run, seines and gillnetters came over the treacherous bar and through the narrows with at least 25 vessels running aground in the process. It is so long ago since a fishery took place that expertise on entry through the difficult passage was lacking.

The vessels fished all night for a catch of five hundred thousand in the first twelve hours and a total catch of 1.4 million for the 10-day continuous fishery. The catches were so large that many boats had deckloads, two seiners sank and several threatened to sink.

Large packers would not get over the bar (which had a maximum depth of 12 feet) and the smaller ones could only get in and out at the high slack tide. Consequently the fishing companies declared a moratorium on fishing for twenty-four hours. Canadian Fishing Co. foresaw this problem and had ready a fleet of 20 dump trucks which hauled 350,000 chum salmon to large brine tankers waiting at Cowichan Bay.

This was the largest catch on record from Nitinat. Even with this large catch, an escapement of 200,000 chum salmon to the Nitinat River, plus another 50,000 to other streams around the lake was achieved, the largest in recent years.

K. Pitre

MANAGERS REPORT-SOUTH

I would like to take this opportunity in my first contribution to the Sounder to congratulate all of those assisting in the development of an excellent in-house newspaper. We have all thought and talked at some length about the need for improved communications within the organization and up to this juncture, the Sounder represents the best tangible result of that effort. Certainly the staff in the South were delighted to participate in the enlargement of the paper from the Northern News to the North-South Sounder.

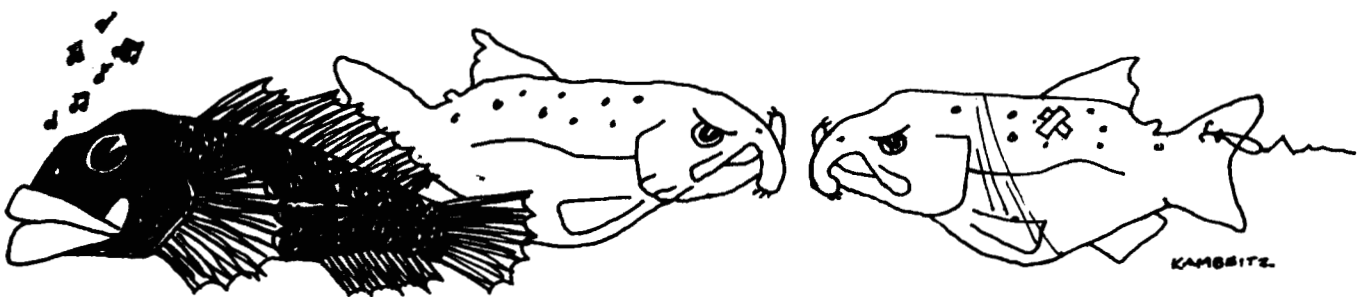
Undoubtedly the highlight of recent happenings in the South centered on the unexpected and magnificent return of chum salmon during this past season. After all of those years of poor return even the most coloured old tigers looked downright beautiful in the quantity that we saw this year. The total catch south of Cape Caution will considerably exceed $3\frac{1}{2}$ million chum salmon by the time the final tallies are in which will put the total regional catch over 6 million. This represents the highest annual catch since the early 1950's. The area that provided the most interest was Nitinat. During R. G. McIndoe's absence on a business (?) trip, his Divisional staff managed the largest recorded run in history to perfection. They achieved their pre-season escapement goal of 200,000 while permitting a total catch of 1.5 million.

The senior Regional Executive have participated in the development of regional and national objectives for the Fisheries Service. In association with the latter a number of sessions have been held with Research and Development (i.e. F.R.B.) aimed at developing truly regional objectives in common result areas. A meeting will be held on November 24 with the new Director of the Nanaimo Biological Station, Dr. W. E. Johnson, and his staff. The objectives developed at this level will form a very strong base from which to develop objectives at the Branch, Division, Unit and District level.

I would also like to report on some recent organization changes in the Fraser River Joint Advisory Board and the Fraser River Program Committee. The Board has been reconstituted to include, on the Federal side, W. R. Hourston, E. M. Clark and Dr. A. T. Prince of Water Service. The Provincial representatives will be Messrs. G. E. Simmons, V. Raudsepp and B. Marr from Water Resources Branch. The Fraser River Joint Program Committee has been essentially disbanded. With regard to the dyking responsibilities of that committee, Mr. Clark and a representative to be named from the Province will be the sole representatives. The machinery for administering the upstream storage responsibilities of the Fraser River Program Committee has yet to be determined but in all probability will include a Project Manager and a Steering Committee.

As you are all aware, the Director met recently with the Russian Fleet Commander to discuss the harvesting of herring off the Southern coast as a followup to observations made by the "TANU" and the "G.B. REED". The understanding gained at that meeting was that the Russians were not taking gross quantities of herring but nevertheless their catch represents an anxious spectre with regard to the total future management picture of herring on the British Columbia coast.

R. Crouter



WELL, THERE GOES THE NEIGHBOURHOOD!

SEA OTTERS RELEASED

Back in 1969, the Provincial Fish and Wildlife Service in co-operation with the Fisheries Research Board released 29 sea otters in the Bunsby Islands, 8 miles up coast from Kyuquot. Since then there have been two more such transplants---one small group in 1971, and the most successful, this summer, when 47 were released.

The otters were trapped, on all occasions, in the Aleutians and transferred to the Bunsby group either by air or boat. Aircraft proved the best and was used for this last release.

The "G.B. REED" was standing by with smaller boats in the Bunsbys to transfer the otters to 3 large specially built floating pens. The pens enabled us to observe the otters and feed them twice daily with cod fillets and local shellfish collected by divers. This is the first time pens were used and they appeared to have been worthwhile. One pup died during the first night and a second mature male was found ill and would probably have died had pens not been employed. However, he was quickly noticed, taken to the "REED", and treated by a veterinarian, Dr. Judy McBain of Nanaimo. The animal responded within a couple of hours, regaining consciousness. He was kept in a pool on the "REED" and released two days later in good health.

After two days, Dr. Mike Bigg, F.R.B. Nanaimo, decided that the otters were ready to be released. The nets forming the underside of the pens were cut at one end and the otters dived under the platforms and swam slowly away. Great care was taken to see that the otters were not chased or needlessly disturbed.

During the next few days Dr. Bigg and myself, along with a photographer from the National Film Board, camped in the area and watched the otters from a distance. 47 animals seems like a lot of wildlife but in a few days we were lucky to see six. Sea otters are hard to distinguish from river otters or even seals from any distance.

Since the release (and the immediate post-release survey), there have been several sightings by people travelling or fishing in the area. There is every indication that the previously released otters established a small colony near Kyuquot. Six otters were seen before the release this year.

The animals released this summer were in better physical condition than their predecessors and much less excitable. Such being the case, we can expect more sightings on our west coast. Any reports of sightings should now be sent to:

Fisheries Research Station,
Postal Drawer 100,
Nanaimo, B.C. Att: Marine Mammals

This address is different from the one given on the posters because the "Feds" have taken over from the Fish and Wildlife Branch.

Some tips on spotting otters might be appropriate.

Sea otters are generally much larger than river otters, they float high out of the water (because of the protective pocket of air in their fur), and unlike a seal, which is very low in the water, the sea otter will "stand up" and look at you with his shoulders out of the water. In calm seas, an otter appears with his head arched, chin on his chest, floating on his back, with his hind flippers breaking water like a scuba diver swimming on his back. For speed they will travel on their fronts and "porpoise" along quite quickly.

Sea otters cannot move on land without great difficulty. They rarely ~~may~~ haul out except for giving birth or if sick. Caution should be exercised if one is found on land as they can inflict a most painful and serious bite.

If a carcass is found, check the teeth to confirm identification. The sea otter is equipped with 4 incisors between his prominent and sharp canines, in both the upper and lower jaws.

R.A. Slater,
Kyuquot, B.C.

A COMMITTEE
IS AGROUP OF THE UNPREPARED,
APPOINTED BY THE UNWILLING,
TO DO THE UNNECESSARY.

F. ALLEN

FISH SCALES PROVIDE CLUE

Back in June, the NOB News described how coho that rear on the West Coast of Vancouver Island during their last ocean summer might have a distinct marine scale pattern from coho that rear in Georgia Strait over the same time period - non-resident versus resident coho. Such a natural mark on returning spawners would allow us to identify which Georgia Strait streams and rivers produce resident coho. Thus hatcheries and other forms of artificial enhancement could be focused on those systems most likely to produce sizable benefits to important Georgia Strait sport and troll fisheries.

Results to date on 1968 brood (1971 escapement) coho are very encouraging. Digitized scale patterns, run through an objective computer analysis, gave a separation accuracy of 90 to 95% on known West Coast and resident coho. We used these results to classify scales from 1971 coho escapements to 25 streams and rivers draining into Georgia Strait. We had adequate samples to evaluate seven streams individually.

The Goldstream and Cowichan Rivers at the southeastern end of Vancouver Island averaged less than 25% resident coho in their escapements. Moving north, several Stuart Channel streams averaged two-thirds resident coho, Big Qualicum coho exceeded 75% resident, and streams closer to Johnstone Strait such as Black Creek averaged approximately 50% resident coho. Capilano and Seymour Rivers escapement classified out at over 80% resident - good news for JD and the hatchery crew. Somewhat of a surprise was the count of approximately 70% resident for various lower Fraser River tributaries.

Extrapolating the above classification percentages to escapement counts suggests that the Lower Mainland (perhaps Howe Sound), Crofton to Courtenay, and lower Fraser stream and river systems dominated production of resident coho for the 1971 summer fishery. Ocean tagging, fish size and oceanographic information corroborate these findings. However, a couple more years sampling are in order to substantiate these results and evaluate other river systems such as the Squamish, Puntledge and Quinsam.

A spin-off from the classification analysis was data indicating that resident coho were the slower growing fish in freshwater and that they in turn moved to saltwater during later stages of the smolt outmigration. If our artificial production facilities in inside waters take a similar approach e.g. release coho at average or below average size and after the peak natural outmigration, we may well increase proportions remaining resident. We need experiments to verify this procedure and of obvious importance, we need to know timing and size of natural smolt outmigrants for any system being considered as a possible development site.

A. W. Argue

WE'RE NOT KEEPING UP

The provincial population has grown 87% since 1952. At the same time, there was only a 9% increase in Fishery Officers' positions in the Southern Operations Branch. (A gain of 3 since 1948). In fact, despite the increase in personnel, there is a 45% decrease in time spent on the job because of a smaller work week. In addition, there has been approximately a 22% decrease in seasonal staff since 1948. The Department had 22 manned vessels in 1948, and 14 in 1972. (a 36% decrease).

- from a report by W.D.C. Webber
Fishery Off.

FOR SALE

- almost new Herring Task Force Report.
- cost \$50,000 new.
- will sell at greatly reduced cost.
- will give away if frustration is removed with the report.
- contact Herring Task Force.

Uncle Rhynchus Says:

Provincial undertow returned Fish and Wildlife budget as undersized.

HOWE SOUND MERCURY

During September, the Southern Environmental Quality Unit conducted a sampling of marine organisms in Howe Sound to determine present levels of mercury contamination in the area. In 1970, it was noted the FMC Chemical plant at Squamish, which manufactures chlorine by the mercury cell method, had polluted the inlet by releasing large amounts of mercury in its effluent. High levels of mercury in marine life made Fisheries close the area from Squamish to Anvil Island. Levels remained high in 1971 and the area remained closed to fishing.

In this year's sampling, rockfish, crab, dog fish, and lingcod were the main animals sampled. Analysis of the material by our Cypress Creek Laboratory has shown that mercury levels in all animals sampled are still at a dangerous level in the closed area and above acceptable levels in lingcod and rockfish as far south as the southern portion of Gambier Island.

Although mercury levels in Dungeness Crab have decreased at the head of the sound (Woodfibre to Squamish) from 5.32 ppm (ranging from 1.47 - 13.41) in 1970 to 1.92 ppm (0.77 - 3.29), the levels are well above the 0.5 ppm level accepted as the maximum safe level for human consumption. Levels in dogfish increased from 1.13 ppm in 1970 to 1.96 ppm this year. Rockfish in the closed area contained 0.61 - 1.01 ppm and outside the closure area (Southern Gambier Island) they contained 0.48 - 0.63 ppm mercury. Rockfish around Keats Island contained acceptable levels (0.09 - 0.17 ppm).

It appears as though the fishing closure in Howe Sound will have to be extended for at least another two years. Collections of marine organisms have also been made at another 20 stations as part of the heavy metal monitoring program. These samples are presently being processed in our laboratory.

O. Langer

Salmon Run Too Heavy For River

QUALICUM BAY - More than 200 fishing boats, gill-netters and seiners have been fishing the waters from French Creek to Qualicum Bay this past week.

Standing on my front porch I can count 107 fishing boats, some of which are less than 100 feet from shore.

I can also count 23 different objects floating in our clean blue waters, such as beer cans, pop cans, used oil cans, cardboard cartons and the like.

by VIC CHILDS
Staff Reporter

Having just helped my next door neighbour's son to free a large, terrified loon from a piece of strangulating fish-net, I have a pecked finger and a bloody nose where the poor terrified bird struck me after we had cut it free. This lovely creature was left crying pitifully (wrapped in what might have been its shroud) on our beach as the tide went out.

With deep apologies to swine-lovers, I must say "pigs is pigs," whether or not they inhabit a pig-sty or happen to be swilling on board a fishing boat.

However, regardless of the performances of a few

inadvertant fishermen, the great Commercial Fishing Derby was apparently the culmination of a successful action by the department of fisheries, and should not be considered as a danger to future salmon stocks.

Parksville's Fishery Officer Andy Skipper of the southern operations branch, department of fisheries, told the Progress this operation has given the Canadian taxpayer a great return on the outlay of public funds that were used to get the Big Qualicum Fishery project started.

An exceptionally heavy chum salmon run created a unique problem this year. If indiscriminate numbers of fish were allowed to go up the streams, they would destroy the entire run by virtue of numbers; eggs already buried would be uncovered by latecomers, and an extremely large hatch would create feeding problems, causing massive starvation.

So fishing was allowed in the Strait of Georgia in order to crop the surplus chum. About 300,000 Qualicum chums have been taken this year, 200,000 in Johnson Strait, with the remainder netted here last week.

Very few coho were caught in the nets, and fisheries people say that close checks show plenty of fish will enter

local streams in order to ensure the optimum spawning number required to maintain the required level of stock.

Mr. Skipper said the chum spawning runs so far up the Little and Big Qualicum Rivers, and even the Englishman River have been "excellent" this year.

As an example of a shot in the arm to Canada's economy, he said, consider the top boat this week which netted 5000 fish in one day. The price of about \$2.00 per fish was divided among the five-man crew (\$10,000) but there was also about \$1.87 for roe per fish to be considered, plus the wages of the processing and canning plants.

The Progress hopes to carry the full story of the fisheries project in the near future.

PARKVILLE PROGRESS Nov 1/72

If you have good manners,
you can get away with almost
any kind of morals.

the
LATE SPAWNERS

SHH..! I HEAR
SOMEONE COMING

YEA..! ME.

KAMBEITZ

LETTERS TO THE EDITOR

Editor:

Once again NOB and SOB relations in the Vancouver office have taken it on the chin. We are referring to the scheduling of Christmas parties.

In mid-October notices were posted through the building that the Dept. of Supply and Services (in conjunction with the Fisheries Staff Association) would be holding a Christmas dine and dance party on December 15. All personnel and friends were invited to attend (for the paltry sum of \$7.50 per couple). Great! This would provide a good opportunity for the NOB's and SOB's to get together socially, an occurrence which happens all too infrequently. From what we have been told, ticket sales have been brisk.

By November 21, most of us had managed to squeeze \$7.50 out of the "family finance company" for tickets to the Supply and Services' dance. The same day we were informed that the SOB had decided to throw a separate SOB party on the same date! Is a duplication of effort necessary? Is it not enough to have polarization occurring between North and South on almost every level; do we have to extend this to our Christmas festivities as well?

Disgruntled Fisheries Service employees

*Editor's Note: by press time there were
fifteen signatures on this letter*

Editor:

There are 30 party days left to Christmas. Is it a coincidence that there are two "Fisheries" parties scheduled for the same night?

Of course one of them isn't open! An invitation to buy a ticket is required for outsiders to attend the S.O.B. "do". These chosen few appear to be "management".

This must be the only goddamned organization in the world that discriminates socially especially in the season of so-called goodwill - and the Director wonders when only a few lost souls attend the picnic - and is it any wonder that the Staff Association asks if it's worthwhile trying to knock some spirit into Fisheries personnel.

Can't we just pool our resources this once.? If so, then let's get to it. If not, then I hate to think the "universe is unfolding as it should"!

Editor:

For my first contribution to the "Sounder" I have for sale 7 cloth (bullion thread) hat badges @ a cost of \$5.50/badge and if there is enough demand for the cloth badges; i.e. for blazer crests as well as cap badges, I can order more @ the same price. If I order more, it will take approximately 10 weeks for delivery.

Not too much new and unusual has happened here in Campbell River except, as you all may know, we have had an extended chum fishery which has been the longest in several years.

Finally as a bit of afterthought, I personally would like to see a little more technical reports and data filter down to the Fishery officers as we are constantly dealing with the environment and have been trained to do some of the technical work. We should be kept in the know and not find out about useful information i.e. estuary studies, in a hand-me-down way.

Well that's all for now; so keep up the good works called "COMMUNICATIONS".

Brian A. Richman

Editor:

Being this time of year, I think it is time for a thank you and hats off to people we have served with.

You folks in the south think you have it all. No way! Merry Christmas from the Skipper and crew of the "FALCON ROCK".

F.P.L. "FALCON ROCK"

LOCAL INITIATIVE PROGRAM—PROJECTS BY PEOPLE

I recently represented the Region at a meeting called by the Department of Manpower and Immigration who are again promoting the Local Initiative Program.

Hoping that the Fisheries Service will derive some benefits from projects undertaken by community groups, some knowledge of this program is appropriate.

The objective of the Local Initiative Program is to create jobs for the unemployed as well as to improve the quality of life.

Financial grants are given to established local organizations and citizen groups or to groups formed expressly for the purpose of carrying out projects. Funds are allotted primarily to cover costs such as materials, supplies, rentals, equipment and employer contributions to unemployment insurance and other plans.

Application forms, detailed criteria and additional information can be obtained at all local Canada Manpower Centres. Deadline is December 31, 1972.

I am sure you have thought of projects that would be of value to your area, but not having the necessary funds, have not pursued them. Although we cannot become directly involved with any project, it seems reasonable to bring this program to the attention of your community.

The making up of brochures pertaining to certain public accessible streams, the type of salmon, the way the runs have been rehabilitated, making people aware of our importance to all aspects of environment, etc., is one project that comes to mind. No doubt you will have many others.

With these thoughts in mind, may I urge you to become involved by discussing opportunities with groups in your community.

Capt. M. B. Gay

She worked for the Dept. of the Environment...
and wore a beautiful ring made by ...
resident craftswoman = Elly =



Rings
Brooches
Cuff-links
Earrings
Chains
Tie tacks
Bracelets

For personalized designs and hand made jewelry in silver and gold call 1805 or visit the 9th floor. Bring in those old diamond-filled ornaments from your grandmother and have a new jewel created. Give it that special government touch!

Visitors to the Capilano Hatchery are advised to wear warm clothing and to bring their spectacles. Many of the signs are quite long and some make for difficult reading. The Hatchery is open to visitors from 10 am to 4:30 pm seven days a week.

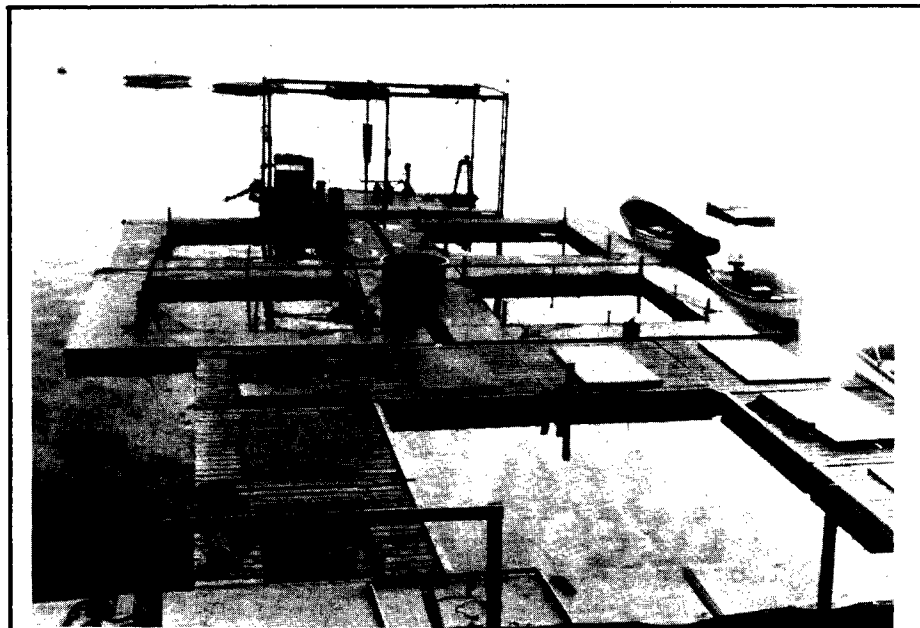
HOW ABOUT THAT.

It was reported in March, 1966, that a dive of 1,970 ft. had been recorded by a depth gauge attached to a Weddell seal which stayed under water for 43 minutes 20 sec. in McMurdo Sound, Antarctica.

U.S. TRIES SALT WATER REARING

Recently, Dr. H.R. (Hugh) MacCrimmon from the University of Guelph was in Vancouver in conjunction with a background paper on freshwater aquaculture he is writing for the Department. Jerry Paine, who knew Dr. MacCrimmon from his University days, arranged a trip to Manchester, Washington (near the Bremerton Naval Station) to see the saltwater rearing experiments on salmon operated by the U.S. Federal Government (National Marine Fisheries Service) and the commercial venture of Domsea Farms Inc. (a subsidiary of Union Carbide).

Access to the N.M.F.S. experiments is through a fuel depot operated by the U.S. navy and as aliens we had to be under surveillance of government staff while we were on naval property. The operational headquarters is an old ship called the "Brown Bear" moored to the wharf.



*N.M.F.S. Experimental Salt-Water Rearing Pens
- lids on walkway cover smallest pens*

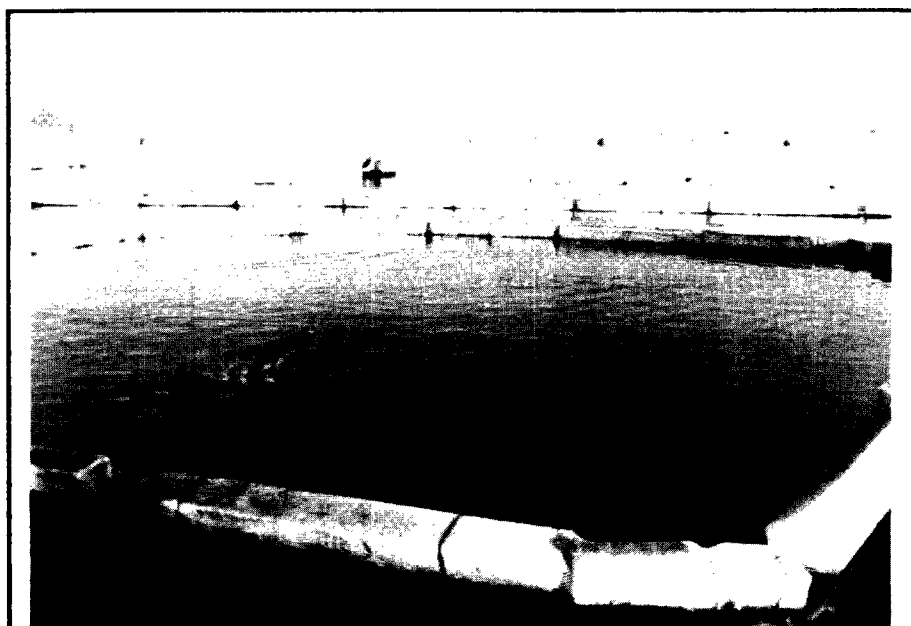
Most of the pens were quite small and enclosed in a large wooden float. Two larger hexagonal pens are to one side and the the metal floats and expanded metal walkways support the netting for the pens. These should be capable of holding several thousand market sized fish. They also had a stockpile of floats and walkways for replacing the older equipment and expanding to a production size.

Our guides explained that they had difficulty raising species other

than chinook and coho. They had also tried a variety of crosses which were not successful. The food they were using was "Oregon moist pellet" which is expensive, but is the only food that chinook do well on. We were told that chinook smaller than 70 to the pound, did not survive when introduced to saltwater; coho had to be larger than that. Disease apparently was a problem to them and currently kidney disease and furunculosis were giving them a lot of trouble. (Furunculosis causes a large blister-like formation on the body of the fish). They were feeding the fish antibiotics in the food, but the current strains of the bacteria seemed to be quite resistant to the usual treatment.

There were also separate pens in which feeding experiments were being conducted - such things as frequency of feeding and size of particles.

Pens were made of marquisette or woven webbing and the complete operation was surrounded by an additional net-"shark net" - to keep the dogfish and diving birds out. They were all covered with webbing to keep out gulls and kingfishers



Domsea brood-stock pen

Our guide then took us by boat to the nearby commercial Domsea operation. Domsea were raising coho primarily, and they were feeding the cheaper dry pellets. The large pens were anchored at the corners and had no rigid structures. The top of the pen was rolled over chunks and styrofoam logs. We were told that they had problems with the pens collapsing in the tidal current before they had developed a good anchoring system. This operation too, was surrounded by a shark net. Above the pens are wires with long pieces of coloured plastic to frighten the gulls. It looked like a hand laundry but apparently worked; except when no one was nearby and the gulls landed on the floats and jumped into the pens.

The pens were about 35' square and held about 1/2 million, 3 or 4 inch fish. Some pens held mature fish that were to be used for brood stock. Their eggs will be supplemented with eggs from the nearby Cowlitz River.

The fish they were raising were to be marketed when they reached 10-ounce dressed weight size. They were planning to do some size sorting so that the larger fish could be marketed first. The product apparently looks good in the market, fresh or frozen and the taste is excellent. They apparently have to have additives in the food to get good flesh colour.

Problems still exist in the operations; the first is that the bulk of the fish are going to be ready for market at the same time and only for a short period at best; secondly, the colouring additives have to be passed by the Food and Drug Administration and third is disease made more acute by the density of fish and restrictions on the use of antibiotics in food for human consumption. Food is also expensive and it doesn't yet appear that Domsea "beats nature at her own game" as recently reported in the Vancouver Sun (last October, 1972).

D. Harding

Mercury and old car bodies --

an iron overlay of crushed old auto bodies topped with sand can be an inexpensive and effective way of isolating mercury on the bottoms of lakes and streams, according to scientists at Midwest Research Institute. In a study done for the EPA, researchers found mercury ions diffused from sediment into the water where they are converted to highly toxic methylmercury by fish and other aquatic organisms. MRI discovered that the iron reduced the mercury ions to elementary mercury, and prevented accumulation of toxic mercury in fish.

Research/Development, Nov.1972

Uncle Rhynchus Says:

Tide is right in the Dept. of the Environment for two Deputy Ministers. East and West?

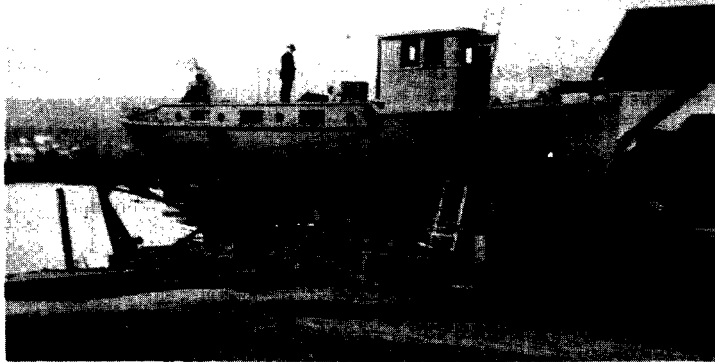
NEW "SOOKE POST"

A contract has recently been awarded to Philbrooke's Shipyard Ltd., Sidney, B.C., for the construction of a 64 foot high speed fibreglass patrol vessel.

This replacement unit for the "SOOKE POST", based at Queen Charlotte City will cost \$250,000.

Permission to call the new vessel "SOOKE POST", thereby perpetuating a worthy and historic name, has been received from the Department.

Capt. M. B. Gay



"F.P.L. EGRET" Newly constructed....1918.

MANAGERS REPORT - NORTH

I hope that readers feel the same way about the Sounder as I do. Over the past few months, this publication and its precursor, has become an event that I look forward to with a pleasant sense of anticipation. For all of us the paper is a means of communicating with others in the organization, a way of sharing experiences with others beyond our normal range of contact. I think that the Editor has done a fine job. The success of the paper depends, however, on the participation of readers to keep it alive and relevant, so give your little bit.

The past month for me has been relatively quiet. Certainly, the feverish activity that characterized the salmon fisheries has died away. The Branch has just begun to plan for the 1973 salmon season. Our Prince Rupert meeting at the end of this month to review the 1972 fishery and to discuss the 1973 expectations is both an ending and a beginning, a process that more or less officially draws the curtain on 1972 field activities and lifts the lid to 1973. I am hopeful that at this meeting we will also get a chance to talk about other aspects of our work: the herring fishery, oil spill emergencies, R.B.U.'s, logging guidelines and vessel inspections.

We were all glad to see Jim Connor come back safe and sound from a month's holiday in the Babine wilderness. Although he claims to have spent his time assiduously hunting the wily moose, he came home empty-handed. Blames his bad luck on the lack of snow! Some fun.

J. R. MacLeod

A SHORT TACK

by A TROLLER

The Department of Fisheries is constantly trying to put the message across that adequate protection is being given to the Salmon bearing streams and rivers of the B.C. Coast. It may be that the general public and the major portion of the sport fishery believe this but there is no way the Department can get commercial fishermen to believe the message.

Some of the reasons are obvious if one looks at the performance in the area covered by the local office of Fisheries. Envision if you can an area that begins at Shelter Point south of Campbell River and continues south on Vancouver Island to Mill Bay, crosses the Gulf to a point near Howe Sound, and continues N.West to Toba Inlet taking in statistical areas 14 to 18 plus a portion of 28. There are 13 fisheries protection officers including the 3 skippers of the 3 patrol boats assigned to this area. These personnel are supposed to work a 37 1/2 hr. week. Overtime is frowned on by the Department heads in Vancouver. How this is possible interests me immensely. It is true that casual Protection Officers are hired during the (busy?) season.

In Nanaimo area at the moment, as far as I know, there are 2 extras, far from being

enough in my opinion. Casuals are hired on a man days basis. In other words, the office is entitled to hire so many men for so many days and when the number of days has been reached, they must be laid off regardless of circumstances.

A Fisheries Officer must have a working knowledge of more things than a fisherman; knowledge of mechanics, biology, chemistry, navigation, size of nets, length plus many more things.

He must police streams, fry transfers, water levels, logging damage, issue permits for food fish, patrol and police the herring fishery when it is operating, attend to oil spills, fish kills, and do hold inspections. The list is endless, and all of this for a handful of people on a 37 1/2 hour week. Now I ask you: 'Who is fooling who?'

I have maintained for some time now that there should be a Biologist plus a couple of Technicians stationed in the local offices. Whether the Department overall is understaffed I wouldn't know; but I am sure the local offices are. Certainly a biologist stationed locally would help, as there is all too often a sometimes complete disregard for the recommendations of the field officers.

In Vancouver, at the corner of Pender and Broughton Streets, is a huge edifice in which the Department of Fisheries has 6 floors of offices

plus other offices scattered throughout the city. In these offices are flocks of Biologists, Engineers, Economists, Technicians, etc., all busy making reports, graphs, charts, and what have you and all very essential no doubt. Sometimes I think that the only thing the re-organization

did was to put an increasing number of personnel in a central location far removed from the areas of neglect. In the face of this is it any wonder that Fishermen as a whole have developed a cynical attitude over the years and that it remains little diminished today.

IT AIN'T NATURAL

"There are species of orchids that have puzzled naturalists since the days of Dawin. They seemed to offer no inducement as their part of the deal, yet still insects did their job. At last, in 1928, a woman named Edith Coleman solved the problem in her study of an Australian orchid named Cryptosylia. The scent, a perfect imitation of the smell of the female of a species of fly, acted as an aphrodisiac on the male. He was drawn to the flower. There he encountered as part of the orchid's structure a perfect imitation of the female's abdomen. It was all too much for him, and in his efforts to copulate with the orchid he got himself nicely dusted with pollen. I am aware of no more immoderate fraud in the natural world."

From "The Social Contract"
by Robert Ardrey

NANAIMO TIMES Nov/72

HERRING POLICY

In mid-May of 1972, the Regional Director formed a Fisheries Mission Regional Herring Task Force "to develop objectives, policies and plans for the herring fishery for 1973 and beyond, by June 30, 1972". Emphasis was to be on "day-to-day management, catch utilization, entry control and size of harvest". The task force comprised thirteen people, three of whom were from the Fisheries Research Board (Nanaimo and UBC Stations).

The full task force met a number of times (>10) as did a number of working groups. The June 30 deadline slipped by with the task force still trying to reach agreement on such matters as how to limit the catching power in a given area (discussion ranged from licence limitation to lotteries, auctions and order of fishing), gillnet vs. seine, whether packers should be permitted or how to improve quality of catch. In mid-July, the report of the Herring Task Force was presented to the Regional Herring Management Committee and then the Regional Executive.

The Task Force provided not only an in-depth study of herring and the herring fishery but also defined basic principles which can be applied to most fisheries. I think the Task Force's members came away with the feeling that they had achieved something worthwhile and that similar Task Forces should be struck for other species.

After two to three weeks discussion and re-writing, the B.C. Herring Management Committee prepared a document for the fishing industry. On August 18, the Director presented this document to the Herring Management Advisory Committee (comprised of members of the industry). On September 15, the same group met again. On October 26, a meeting was cancelled.

On November 8, 1972, the Minister's Office announced a Pacific Herring Policy, the details of which are:

- catch limit in 1973 - 50,000 tops
- no herring fishery in the Strait of Georgia between Campbell River and Victoria except for minor food and bait fishing under licence.
- number of herring fishing vessels limited to those that participated in the fishery in a major way during the 1971-72 season.

The Minister said "we have to protect our resources here". "I am concerned about the threat of Russian vessels operating just outside our 12 mile limit". "I don't think the Russians will continue to threaten herring stocks that are under licence control".

A meeting has been called for November 27 to present the Minister's Policy to the Herring Management Advisory Committee.

F.E.A. Wood

Salmon threat made by Alaska governor

JUNEAU, Alaska (AP) — Gov. William Egan threatened Monday to allow Alaskan fishermen to harvest the entire Bristol Bay salmon run unless outside fishing interests agree to reduce their take of western Alaska salmon.

Egan, visibly upset over Japanese refusal to diminish their fishery effort, told newsmen he would direct state agencies to dam up rivers in the Bristol Bay drainage, creating a land-locked salmon resource "such as the world has never seen before."

The governor also directed his message to domestic West Coast fish packers, urging them to "implore their people

to look elsewhere" for salmon.

But Egan said it was mainly the Japanese fishing which threatened to "cripple and bleed to death" Bristol Bay salmon runs.

"Either you quit fishing on the high seas for Bristol Bay salmon for a few years, at least," the governor said, "or there isn't going to be any Bristol Bay fishery on the high seas for you to fish."

Egan's impromptu news conference followed word from Washington, D.C., that Japanese representatives to the International North Pacific Fisheries convention had refused to reduce their take.

VAN SUN.

CHRISTMAS SHIBANG

jointly sponsored by the Fisheries Staff Assn & the Dept of Supply and Services social club.

Place:
The Peretz Auditorium
at Oakridge. 6184 Ash.

Time: 8pm-1am Fri 15/72.
turkey dinner at 10.30

Live music, to match your mood all night
Drinks 4 for 2⁰⁰ Beer 5 for 2⁰⁰
Tickets 5⁰⁰ Single 7⁵⁰ couple

OIL POLLUTION NEMESIS

With the prospect of Alaskan oil being transported down the coast of British Columbia we have to be concerned with the possibility of a large scale spill off our shores. Both tanker sizes and marine traffic are on the increase, further enhancing the chances of a marine disaster.

In order to obtain an insight into the patterns of oil spills and present clean-up techniques the Applied Oceanography Division of Dillingham Corporation conducted a study and published their results in 1970, 38 spills of major proportions, i.e. 2,000 barrels or more were investigated.

Results were as follows:

Source	- 75% were associated with vessels, principally tankers
Composition	- 90% involved crude or residual oils
Volume	- 70% of the spills were greater than 5,000 barrels
Distance Offshore	- 80% occurred within 10 miles of shoreline
Duration	- 75% of the spill incidents lasted more than 5 days
Extent	- 80% contaminated less than 20 miles of coastline
Coastline	- 85% occurred off shoreline considered to be recreational
Distance from Port	- 75% were within 25 miles of the nearest port.

The majority of the spills could be traced to adverse environmental conditions and human error. The environmental factors which appear to be most significant with regards to spilled oil and control activities are as follows:

1. Sea conditions - short, choppy seas appear to render most containment booms ineffective. With long swells, oil containment by boom appears to be possible in heights up to 2 feet. Unfavourable sea conditions tend to clean up the oil naturally.
2. Wind velocity and direction - These are the most significant factors controlling movement of spilled oil in open water. Oil has an average drift rate of 3.3% of the wind velocity.
3. Surface currents - near shore surface currents are usually dominated by the effects of tides. Indications are that the oil will escape under a boom or barrier at current velocities of less than 1 knot and that increasing the depth of the barrier will not alter this situation.
4. Tides - complicate shoreline protection and clean-ups. Efforts to protect the shoreline must be deployed seaward of the low tide line.
5. Temperature - lowering temperatures increases the viscosity of the oil, shows the evaporation rate of the lighter fractions, decreases bacterial decomposition, inhibits ignition and decreases the effectiveness of chemical dispersants.

A recent Water News Letter (November 6, 1972) seems to verify the "human error" aspect of oil spills. According to Environmental Protection Agency and Coast Guard figures there were 8,496 oil spills on water reported in the U.S. in 1971 indicating that the number of accidents is not diminishing. Most oil companies and government officials see prevention of spills as more crucial than research in clean-up methods.

R. Kussat

Editor's Note: *This is the first of two articles dealing with oil pollution. Next month Mr. Kussat outlines the various oil spill controls and discusses the effectiveness of our "Contingency Plans" and prevention arrangements strategy.*

NATIVE INDIAN TRAINING PROGRAM 1971-72

In the spring of 1971, an in-house training program was launched by the Fisheries Service to encourage members of the native populace to seek careers in the resource management field. This program was conceived with the intention of providing specialized training for young native people who may be personally suitable for such jobs but lack the technical qualification. It was felt that such a program carried over a five-year period would result in the employment of a substantial number of young Indians. In this way young people still in school might be persuaded to think of the Fisheries Service as a career opportunity - something that they don't do now - and would be encouraged to continue their education through BCIT or a university to qualify for technical and professional work with the Fisheries Service. From the Fisheries Service point of view, there are a wide range of benefits that will flow from participation of Indian people in fisheries administration.

It was decided that a two-year training program was required; with exposure to both biological and enforcement oriented work in the first year and specialization in one of the two fields in the second year.

The selection of the trainees (four) was done through the Department of Indian Affairs and Northern Development field offices. Eighteen candidates were interviewed for the four available positions. The successful candidates were taken on staff in June, 1971 and after a short orientation period were placed on surveys to begin their training. J. D. Buxton administered the program.

The performance of the trainees was evaluated every six months, using the rating forms submitted by the supervisors as a guide in measuring their performance.

At this time two of the trainees are still on staff: one, Willie McKenzie is working in the N.O.B. as a fishery officer trainee and the other, Alvin Sewid, in the S.O.B. as a biological technician trainee. The success of these two have made the program worth the effort.

A new, greatly expanded program will begin next April if financial assistance is received from the D.I.A.N.D. This will be a two-fold program. One aspect will create employment for native young people on a casual basis and the other will continue the special training program for fishery officer - technician candidates.

The training program will be modified to implement changes based on the lessons learned in the two years of the pilot program.

While a fifty percent success figure is not impressive for the pilot program, it is felt that with better recruitment techniques and the modified training program, the success ratio will improve and we will be producing well-trained, useful employers for the resource management field.

The inclusion of native people in the Fisheries Service will produce great benefits for us in the form of improved relations with the native populace, as well as providing them with meaningful and rewarding employment.

J. D. Buxton

Pink Salmon Tag Returned from Yorkshire

Under date of October 11th, 1946, Mr. G. L. Simpson of West Ardsley, Wakefield, Yorkshire, England, returned to the Pacific Biological Station a salmon tag (two coloured celluloid disks fastened together by a nickel silver pin) which had been placed on a pink salmon on August 22nd, 1945, at Nodales channel, lower end of Johnstone strait. The rather conspicuous tag had quite escaped the fisherman and the cannery employees and was found only when it reached Mr. Simpson's table.

Left-turning fish wanted

OLYMPIA, Wash. (AP) — Experiments are under way to develop a "left-turning" salmon that will avoid British Columbia fishermen as they head to sea from the Strait of Juan de Fuca, turn south and keep Washington fishermen happy.

"Young salmon migrating seaward from Puget Sound are largely behaving as if there is a right-turn-only sign posted at Cape Flattery," the state fisheries department says.

"Although this is fine for the large Canadian trolling fleet plying the waters off the west coast of Vancouver Island, it is not so good for the citizens of Washington State.

"We believe there is a very good chance to discover or develop left-turning coho salmon from Puget Sound hatcheries."

VAN. SUN.

BORDERLINE FISH

Bar sinister

The idea of doctoring salmon so they turn south into American nets instead of north into Canadian nets after they migrate through the Strait of Juan de Fuca understandably would have appeal for U.S. fishermen.

What's happening, if we read the euphemisms out of Olympia correctly, is that "fin-marking experiments" at the Cowlitz River hatchery offer "a very good chance to discover or develop left-turning coho salmon from Puget Sound hatcheries."

Apart from sounding like a most un-American activity—a species that runs to reds and parlor pinks hardly needs a programmed left-turn — there's an Auschwitz quality to the so-called "fin-marking" that is disconcerting.

One must assume this is just a nice-Nelly way of saying that the left fin is being clipped to make it shorter than the right fin, handy for going around mountains but really not the sporting thing to do.

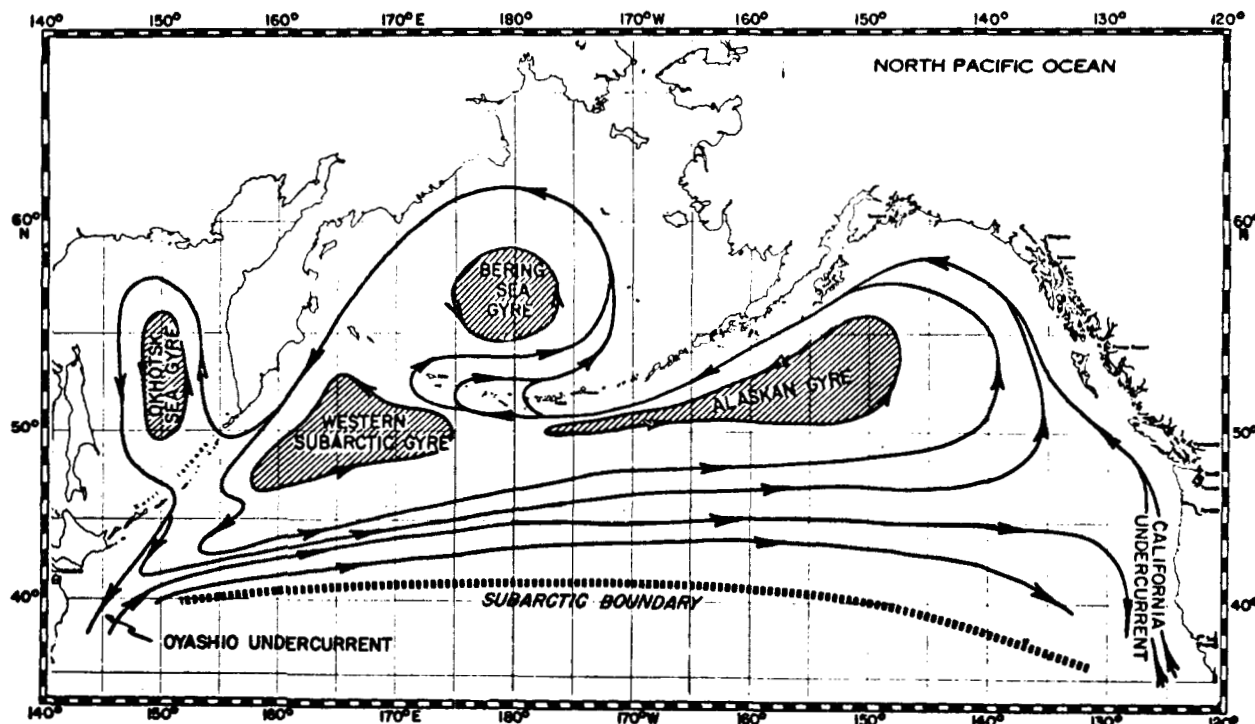
We don't wish the Cowlitz boffins any more ill luck than they deserve. But if their salmon wheel right through the Panama Canal and end up swimming circles in Passamaquoddy Bay, we won't cry too much, either.

VAN. SUN.

In the last week or so, most B.C. papers carried articles concerning "left-turning" salmon suggesting that U.S. scientists were going to develop stocks of salmon that would avoid Canadian waters. These articles alarmed many Canadian fishermen and politicians.

The original release referred to stocks of coho from the Cowlitz River in Washington and the Toutle River in Oregon. Tagging and scale studies have shown that coho travel least in the ocean of all the North American Pacific salmon. Some coho stocks are "resident" in the Gulf of Georgia and others are known to reside in Puget Sound for their saltwater life.

Chinook tend to migrate greater distances during their saltwater life but generally don't migrate far offshore. Some chinook stocks also tend to reside in the Gulf but probably not to the same extent as coho. Those that migrate outside tend to move in a northwesterly direction with the "California Undercurrent" (see diagram of ocean currents). Winter winds set up a northwesterly drift of surface water along the coast from October to March. (I.N.P.F.C. studies). This coastal surface current breaks down in the summer and may actually reverse under the influence of the westerly winds.



Anyone who has watched water going down a drain will have noticed the anti-clockwise direction of flow caused by the rotation of the earth. This phenomenon is called the "Coriolis Effect" and actually influences the direction of currents in the ocean. These rotational currents are called "gyres" (as in gyroscope) and there are 4 in the north Pacific plus a general anticlockwise drift over the whole area above the Subarctic Boundary (see diagram). The most important one in terms of our salmon is the Alaskan gyre.

Species of salmon that migrate to the open ocean for their salt-water life (sockeye, pinks and chums) hitch a ride on this current and are eventually swept back toward our own shores. A Japanese scientist at the recent I.N.P.F.C. conference in Vancouver stated that their tagging studies showed that some Japanese chums ride across the Pacific to the Alaskan gyre and return around the Western Subarctic and some even go around the Bering gyre. Some others take the shorter trip only around the Western Subarctic.

It appears that the American scientists would have some success with left-turning coho and possibly chinook, however they should have little success with species that ride the currents. Even left-turning coho are subject to the Juan de Fuca fishery when they return, as fish don't respect international boundaries.

D. Harding

OWIKENO REVISITED

Three years had passed since I had last seen Owikeno Lake - and now I was returning. It was as I had remembered - very little change, though the loggers had been active. The location of their activity was immediately obvious from a plane, but from a boat, things looked very little different from the three years previous. This was my memory but in actual fact, the lake presently looks just as it must have looked one hundred, three hundred, perhaps 1000 years ago.

I have never been in Owikeno when I have not been impressed by its beauty and grandeur - I have seen it in all moods. This October perhaps I saw in it a beauty that I never saw before - nature presented at its very best - cool sunny weather, clear skies and the beautiful autumn colours of its deciduous trees all blended to make a vista beyond compare. Or perhaps it was knowing that this magnificent beauty might never be seen by me again - by my children almost certainly not.

Even now, the quiet solitude is interrupted by the distant whine of man's progress. They say that beauty is within the eye of the beholder - but surely few would be unaware of the natural beauty presented by nature in the setting that is Owikeno. Perhaps I am biased - my interests, the sockeye, are a natural by-product of this beauty and it is to the sockeye's advantage to leave this beauty alone to continue its timeless future. But to others the very essence of this beauty represents money. The mountain slopes covered by an endless green carpet may soon be removed for the benefit of man - the immediate benefits are easily seen - jobs, trade etc. British Columbia thrives and grows on the lumber industry. Man perhaps more than ever is a fool. Before in his ignorance, he might be excused the massacre of his own environment, but now he knows better - he knows that he cannot repair or replace the damage he so readily inflicts. Still, he continues.

Owikeno to date is relatively untouched by man. It has certainly been used by man, but not in the physical sense - more, it has nurtured man - provided him with food and protection - but that contribution is no longer sufficient to appease the hunger of man. Owikeno Lake and its valleys will contribute all they have - but it is not a bottomless well. Our foresters assure us with all sincerity that they will harvest with the very latest techniques to avoid environmental damage and that the results of their harvest will have no ill effects on Owikeno Lake. I know they will try to minimize the effects on the streams but they will not and cannot replace the natural beauty which they will destroy to harvest the timber covering the valleys and slopes. That man can so easily destroy that which took Nature years to create seems incredible. Surely there must be other criteria on which to base values. Owikeno Lake is not one of many. Owikeno Lake is the only Owikeno Lake, the only remaining coastal lake of any size untouched by man. We, more than any are to blame - we know. We are aware, we wring our hands and cry out in anger but do nothing - seemingly resigned to the inevitable. Willing witnesses for the prosecution - but there will be no trial.

J. MacKay

COMMUNICATION ?

All personnel of the Fisheries Service are invited to attend. The Southern Operations Branch have sponsored the above function to initiate the restoration of the warmth and humour which used to prevail at Fisheries Christmas parties. Although another social function had been scheduled for the same evening, we were unaware of this at the time these arrangements were made.

We have capacity for 180 people only. Therefore, contact either Jan Carter or June Budgell, 5th floor - local 3362, as soon as possible if you are attending.



R.A. CROUTER

DEPT. OF THE ENVIRONMENT
FISHERIES SERVICE
JAN-2 1973
PACIFIC REGIONAL LIBRARY

Sounder

SERVING THE PACIFIC REGION OF THE FISHERIES SERVICE - DECEMBER 1972



Photo by S. Zablosky

RECOGNIZE THE COLDWATER RIVER ?

A battle was waged on the Coldwater River this week which could have been avoided had people been more pollution conscious twenty, or even ten years ago.

The fight began to save the spawning salmon when Steve Zablosky, engineering technician for the Fisheries Service of the Environmental Department of Canada moved in to direct river cleaning and channelization on two parts of the upper Coldwater River where logs and debris had formed heavy dams and were blocking the passage of the fish on their way upstream to their spawning grounds.

"As soon as we finished the first log jam we saw the fish swimming up the river again. They hadn't been able to get by before," Mr. Zablosky said. The department is basically doing this work, he said, to save the coho and spring salmon which are the two main species in the Nicola and Coldwater River systems.

In showing the log jams and explaining their removal, Mr. Zablosky noted that while the Department of Fisheries and Environment terms of reference only allowed them to come in when the fish are endangered, "People themselves could have become involved. They could have seen what was happening and worked out a plan of action themselves. They could have gotten permission to get this work

done. When we come in to do the work, it becomes very expensive for the taxpayers."

"This is the third time we have come in to this particular location in recent years, and it could be prevented."

Mr. Zablosky suggested that river bank cleanup, the removal of debris that could find its way into the river and eventual blockage, and the burning of old logs and debris could be a good Local Initiatives Program (LIP Program) for this area. The work could be carried out under the Fisheries supervision and it would provide employment as well as doing a lot to enhance the environment of this area.

...excerpt from an article in the Merrit-Herald, Nov. 1, 1972.

MANAGERS REPORT

I think that my chief activity over the past month centered around the "Expectations" meeting at Prince Rupert, November 26 - 29. Certainly the highlight of the month, if not of the year, was the way in which the staff presented their 1972 reviews and 1973 "Expectations", and participated in the general discussions. More and more I'm convinced that the open, participative style of management is the only way to go.

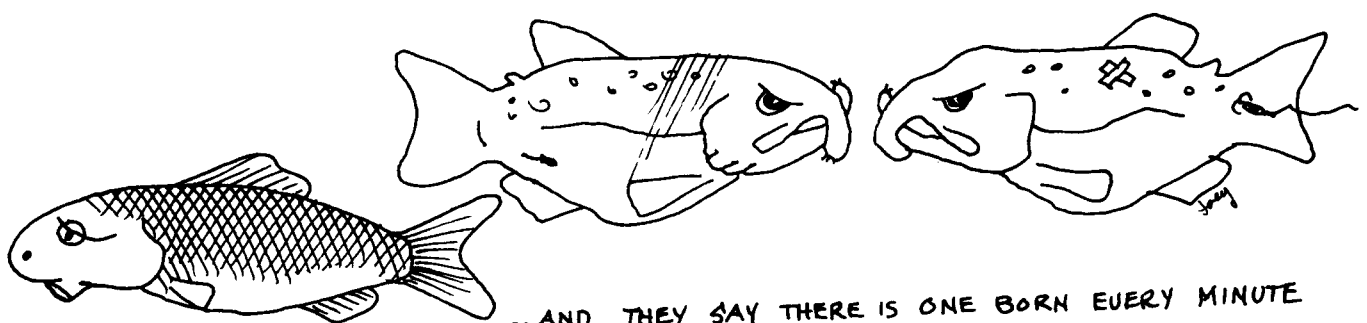
I went to the meeting with an underlying concern, not directly connected to the meeting itself. My concern related to the very high potential number of retirements over the next five years and the question of how to replace those who are leaving. I came home with a different perception of the situation, for in listening to the fishery officers, technicians, biologists and vessel masters who participated, I became acutely aware of the depth and range of talent incorporated in our northern staff. Not only that, but the "juniors" and others behind the scenes came across loud and clear as individuals of no less merit and talent. The question now foremost in my mind is how do we provide enough challenges and opportunities for all these people to get a chance to develop their potential to the point of replacing some invaluable senior people who will be leaving over the next five years?

The second reflection of consequence arising out of this meeting relates to the degree of integration that has occurred in some, not all, districts. It was obvious that in some cases vessel masters, technicians, biologists and fishery officers had collaborated to put together the best report possible--and these stood out like shining stars. For me, it was confirmation that we are on the right track, that the organization can work, that the fisheries resource will benefit from integrated management.

I also want to take this opportunity to confirm the primacy of the Play-oy of Richmond, the original Mr. Ho Ho himself, as an organizer. He is unquestionably without peer in promoting, directing and organizing after-work relaxation and entertainment. Nobody, but nobody has a finer appreciation of the Prince Rupert night-life scene. Obviously, he concentrates on the right activities.

In closing, I want to extend Season's Greetings and best wishes for the New Year to all.

R. MacLeod



OIL POLLUTION NEMESIS, PART 2

Although significant progress has been made in clean-up procedures the problems of application, recovery and environmental damage have in most cases not been solved. A short review of oil-spill control items is as follows:

1. Mechanical containment - booms currently available are considered ineffective in containing oil in other than relatively calm conditions.
2. Pneumatic barriers - consist of a tube or pipe suspended or resting below the water surface from which air is released. The rising stream of air produces an upward flow of water resulting in a surface current flowing away from the air barrier. Appears to be most suitable for fixed installations.
3. Mechanical recovery devices - a variety of these are on the market today utilizing pumps, metal discs or bars, vacuum, and continuous belts. These devices are generally of limited capacity and suited for use in calm waters only.
4. Absorbent materials - may be classified as natural materials, i.e. peat moss, straw, treated, i.e. zinc stearate talc; and manufactured, i.e. polyurethane foam. The major problems associated with absorbent materials include: logistics of transporting enough materials to spill location; dispersal of material and obtaining adequate contact with oil; recovery and disposal of oil soaked materials.
5. Sinking materials - are generally fine grained, high density minerals in a natural or processed form. All sinking materials are generally more efficient with heavy or viscous oils. Research is required to understand the effects of sunken oil on the bottom fauna, decomposition rate, rate of oil loss, lateral movement of oil mass on bottom, etc.
6. Chemical treating agents - dispersants have been widely used in some oil spills, notably the Torrey Canyon spill. Dispersants may be classified as (a) water based, (b) solvent based. As a general rule the solvent based dispersants are more effective but more toxic to the aquatic biota and exhibit a lower flash point than the water based chemicals. Dispersants are most effective on light and freshly spilled oil under warm temperatures. Recent tests have indicated that a 68.2 - 99.1% increase in toxicity was demonstrated when oils were emulsified with dispersants.
7. Burning promoters - are wicking agents which tend to raise the oil isolating it from the cooling effects of the water. Generally not effective on weathered oil in cold temperatures where the oil is viscous.
8. Gelling promoters - seem to work well on small scale experiments.

The environmental effects of oil spills have been discussed by many authors and range from the environmental persistence of hydrocarbons to the immediate toxicity of the oil and eventual recolonization of denuded substrate. Blumer reported on the 1969 spill in Buzzards Bay. Within the first few hours or days there was a heavy kill of organisms that came in contact with the oil. The effect extended over all phyla and over benthic and inter-tidal organisms. Within weeks or months after the spill the oil spread to areas not initially affected and the kill extended. However, resettlement occurred, first of the most resistant faunal opportunists and later by a more normal fauna.

Adequate pre-spill observations are generally lacking so that accurate assessment of the spill impact is often difficult. Birds often are the most vulnerable of the living resource, however shellfish are also most directly affected by oil spills in coastal zones.

Despite ample warnings it appears that we are no more prepared to handle an oil spill today than we were 5 years ago. The many variables involved in a spill situation make a uniform response plan impractical. However we should remember that a major spill off the B.C. coast in the future is inevitable especially if the Valdez - Cherry Point route is approved.

In the past we have demonstrated our inability to cope with even minor

spills despite an elaborate spill response plan. "Federal Contingency Plan for Combating Oil and Toxic Material Spills" has been drawn up and provides "on paper" for an immediate federal response capability. Any spill into federal waters should be reported immediately to the OSC (on-scene co-ordinator) which is a Ministry of Transport representative. The OSC will co-ordinate the total federal response and conduct the clean-up with locally available facilities and personnel if possible. Final decision on clean-up procedures will be made by the OSC after considering advice from resource agencies such as the Fisheries Service, Wildlife Service, etc. The overall D.O.E. response will be co-ordinated by E.P.S. Specifically this means that Fisheries requirements and recommendations will be presented to the OSC by the EPS representative at the scene.

R. Kussat

MUST WE GO THE SAME WAY

GUEST EDITORIAL

I have read or been told how the environment is so uncomfortable in some areas that people accommodate themselves in air-conditioned homes, travel in air-conditioned vehicles, work in air-conditioned offices and factories and exercise in air-conditioned gymnasiums but the significance of this never did reach me. Why get concerned if a couple of areas are uncomfortable for living? In B.C. we are immune to such things. Or are we? Last summer the reactions of travellers in the Yukon made me wonder how secure we are in B.C. in keeping some basic environmental values.

A woman in her mid-forties sat alongside her camper and gazed wonderingly at the sky. We heard her remark, "My, what a beautiful sky — and it is blue." She then became aware that we had overheard her remark and she walked over to say, "Excuse me, that remark may sound ridiculous to you but in all truth I have never seen a real blue sky. My mother told me the sky was blue when she was young but it is a new experience for me."

In another instance, a 17-year-old lad would not go near the mountain stream which flowed alongside the campsite. The boy told us that unpiped water was unclean, that it was a carrier of garbage and disease and therefore something to be avoided. It turned out that he had never experienced an unpolluted stream, prior to this trip. The fact that wild duckling were rearing in the stream was too much for him to comprehend at that moment.

A third case was a man in his mid-thirties who remarked that the lack of darkness during the Arctic summer did not inhibit his sleep because the light condition was very much like home. He went on to explain that he lived on lake-side property about 50 miles from the nearest town. At one time the area was heavily wooded and occupied by his and one other family. Ten years ago a major highway was constructed about 5 miles away. Following this, housing units were erected along the lake shore. This was followed by the provision of access to and from the highway. Then facilities for travellers were incorporated. Finally high-powered lamps were mounted on 500-foot-high towers providing 24-hour light. Even today he is at a loss to explain the total encroachment on his environment.

The message these people conveyed was, "do not let what happened to us happen to you." And the advice was, "do not be addicted to having the highest population and industrial growth rates because up to this time such a situation has been a terminal disease for so many fine things in life. And if you must reside or work in a high-growth area, be positive about the retention of some environmental values." People in flight from their experience with progress, development and growth keep giving us a lesson, but do we ever take it to heart? Man learns little from others' experience -- or have you not noted the advancement of the seaside concrete curtain in Vancouver? What's next for us?

C. E. Walker.

MULTIPLE TUNNEL FISH COUNTER

The concept of counting fish as they pass a restriction has been around for a long time. Various methods for counting fish have been used, such as photo cells, conductivity and echo sounding. The most successful of these seems to be conductivity and this principle is used extensively in the U.S. A commercial conductivity fish counter is manufactured by Smith-Root. This counter makes use of a "fish sized tunnel"; i.e., a different sized tunnel for different sized fish, and has two sensors in each tunnel. The counter counts whenever a fish passes the sensors, so a fish passing through the tunnel is counted on both counters. For directional information, a chart recorder must be attached and the chart examined to determine if the fish went upstream or downstream. Selling price of this counter is approximately \$1000, not including the chart recorder.

For the past 9 months, NOB, TSU has been investigating the possibility of reducing the cost, increasing the capacity and improving the interpretation of the output from the counter.

On November 9th, a prototype counter that meets the above requirements was demonstrated to various people interested in the project. The counter is capable of scanning an array of 16 tunnels, produces two counts (upstream and downstream migration) and can be produced for approximately \$2000. So for \$2000, we can now have 16 times the capacity; and a printed record that states "x" number of fish went upstream and "y" number of fish went downstream.

The advantages of the system under development (besides cost and increased capacity) is that a count will be produced only when the fish has gone completely through the tunnel. If a fish enters the tunnel and decides to back out, he will not be counted. Nor will he be counted if he see-saws back and forth inside the tunnel. This is not true of the commercial unit, because it produces a count as soon as a fish is between the electrodes, so a fish backing out would produce an erroneous count.

The tunnels, which have square openings, are built no larger than necessary to accommodate the largest fish likely to be encountered during a migration. The tunnels (without the electronics) were designed for Fulton and were tested there for a period during the upstream migration this fall. During this time, an erroneous count was produced only once. This occurred when two jacks came through together. The electronics have undergone extensive testing in the lab (using simulated tunnels) and they have operated without miscounting over many cycles of operation. When the electronics and tunnels were tested together at Capilano, they counted fish in the proper order. The only difficulty encountered in the test was the fact that the fish being used were small jacks and more than one could easily get into a tunnel. The fish realized the tunnels were the only safe place in the rearing pond, and used the tunnels to hide.

A. Wiebe

HOME IMPROVEMENT AND EXPANSION

After spending many hours sanding, painting and scraping the spare bedroom, Technician Alf Wiebe and his wife Sharon declared the room ready for occupancy. The "occupant" arrived on December 10, and moved in a week later for an extended stay. We are happy to report that it is not a mother-in-law, but their first baby, 6 lb. 8 oz. Christina Annaliese.

Vancouver,
October 27, 1939.

MEMO FOR STAFF

Please note that the Department of Public Works calls attention to the excessive cost of lighting public buildings and requests that the utmost economy be practised by all employees.

Please see that no unnecessary use is made of the electric light in this building.

from the days of
Major Motherwell

PAINTED LADY

As with most people who play with boats for a living, I have my ideas for the perfect Dream Boat to go with the name above. It occurred to me that now would be a good time of year to put some of my ideas on paper. (Just in case Santa reads the Sounder).

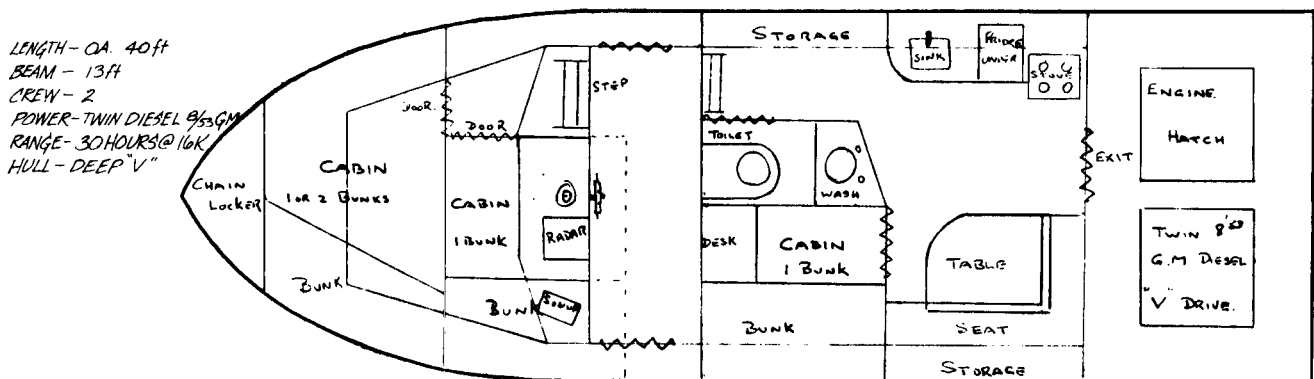
So, Santa, if you do, I would like my Dream Boat to be 38' to 40' long with twin diesels, to have a cruising speed of 16 knots, and to look something like the sketch below.

Layout involves "V" drives for main engines and accommodation for 3 or 4 people in 3 separate cabins. Fuel and fresh water under the floor and 12 V D.C. electric system.

38' to 40' seems to be ideal length for most weather conditions encountered on inland waters and will provide reasonable comfort and privacy for extended cruising year round.

So, Santa, if I am too late for this Christmas, I would accept as a substitute- 5'2", Eyes of blue, 38---24---36---?' Well anyway, Merry Christmas-----I think I'll hang up two stockings, just in case....

John Lewis

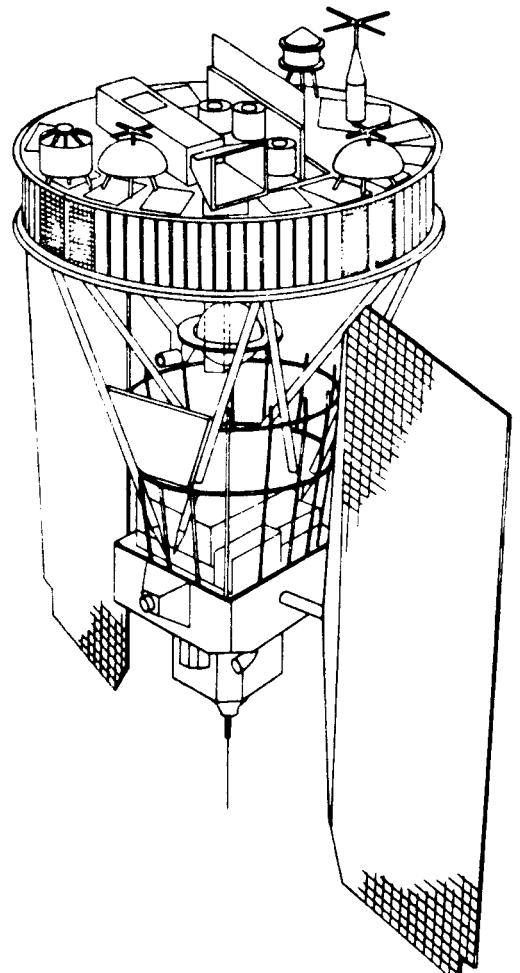


LOOK UP AND SMILE ERTS IS TAKING YOUR PHOTO

From an orbit 565 miles up, all of Canada is photographed every 14 days by the recently launched Earth Resources Technology Satellite. NASA launched the satellite on July 23 and under an agreement, Canada is participating in the program. All this country has to do is contribute its own receiving, interpreting and photo distribution facilities. (Annual Cost \$6 million).

The photos will not help for fish or gear counts as the smallest detail that can be resolved is 300' x 300'. Each 9 1/2" photo covers 100 x 100 nautical miles. Images are produced in the blue-green, red, near infrared and infrared sections of the spectrum. The Technical Support Unit is assisting the Northern B. C. and Yukon in the acquisition and evaluation of photos to see if major groundwater sources in the north can be located.

P. Ryan



CONGRATULATIONS....

Bob Delury and his wife Nancy enlarged their family by one daughter on October 26. 8 lb. 4 oz. (big!) Mary Margaret will be a sister for Naomi.

LETTERS TO THE EDITOR

Editor:

One thing I can't stand is people who publicly (or privately) gripe and then remain anonymous, particularly when only their bellyaching is publicized. So, to the "Disgruntled Fishery Service Employees" in the last issue's letters to the editor, I say put your names behind your complaints, or shut up. Your anonymity, in my opinion, is worse than the situation you criticized.

Sandy Argue.

Editor's Note: It may have been a poor decision, but we deleted the names on the letter to save space, and because not everyone was given a chance to sign the letter. We are sure that they would have stood by their statements, because they did not ask for anonymity. Incidentally, the letter was signed by 11 people from the S.O.B., and 4 from the N.O.B. The only communication we received from the "other side" arrived almost too late for printing and was hurriedly placed on the last page, thus bumping a different article from the November issue.

Editor:

The following letter exemplifies some of the problems fishery personnel may encounter in finding suitable accommodation. This is 2 handwritten pages out of 4 which answers the question whether or not a dog will be allowed in a 3-bedroom rented house with an Officer and his wife:

" Thank you so much for asking about having a dog. So few people today are that considerate. Aside from the obvious damage which can be done by a pup in a house as the result of lack of house-breaking, diarrhea, vomiting and chewing and toe nails on linoleum, less obvious effects can ensue too. A female dog ruins the lawn when she urinates; a male ruins the shrubs and fouls the corners of buildings. You can probably still see the brown spots on the lawn from Cotes female dog. Faeces deposited by dogs on ordinary earth instead of concrete or gravel can result in almost permanent contamination of that area with tapeworm, roundworm, or hookworm eggs, all of which can infest children who later play in that yard. As ex-veterinarians we believe that any home with a pet should have a proper concrete run. Ours does not, so we would rather not have a dog there. By the way, we didn't ban children, just pets. We limited children to two so that the house didn't become the 'rabbit warren' of Rockland. "

B. A. Richman,
Fishery Officer.

LATE BULLETIN

On December 19, at 12:45 p.m., Technician Jerry Buxton was called to the hospital where his wife Erma presented him with a son. Baby Joy Buxton, weighing in at 6 lb. 13 oz., will be a brother for Troy and Kevin.

DATA ON NEW VROOM

Species: Homo sapiens
Subspecies: Lynnette Vroom
Date: November 1, 1972
Sex: female
Weight: 3,345.244 grams
Progenitors: Paul and Penny
Vroom

RECORD CHUM FISHERY

The 1972 Johnstone Strait-Fraser River-Juan de Fuca study area chum salmon return was considerably larger than anticipated on the basis of the pre-season forecast. Since the three-year-old return contingent from the 1968 brood year suggested a poor marine survival it was anticipated that the four-year-old contingent for the 1972 return would also exhibit the same poor marine survival, and that the three-year-old contingent from the 1969 brood year would exhibit, as a minimum, an average marine survival. Thus the 1972 return was predicted as 1,515,000 chum salmon consisting of 60 percent four-year-old and 40 percent three-year-old fish. However the realized 1972 return was approximately twice the predicted size.

Preliminary figures indicate a study area catch of 2.2 million pieces with an average round weight of 11 pounds. Age analysis indicated that the return was composed of 8 percent three-year-olds, 90 percent four-year-olds and 2 percent five-year-old fish. The main strength of the run, as indicated by the catch, was from those stocks which enter Johnstone Strait during the latter half of September and the first half of October. The seasonal catch, by statistical area and fishing days including the week ending September 16 was as follows:

<u>Area</u>	<u>Catch</u>	<u>Days</u>
12	772,000	20
13	669,000	20
14	207,000	13
15	24,000	8
16	12,000	13
17	70,000	4
18	52,000	4
20	190,000	22
29	215,000	7

The 1972 study area net catch was the largest since 1954. For statistical areas 14 and 15, the catch was the largest since 1950 and for statistical area 20, the largest recorded by the present system of catch statistics.

The primary landed value of the 1972 study area catch approximates 6.3 million dollars. The Johnstone Strait "silver bright" chum salmon commanded a high price of 60 cents per pound (cash buyers during the first of the season) down to 20 cents per pound (minimum contract price paid during the last of the season) with an average seasonal price of 30 cents. The minimum contract price paid for the Strait of Georgia and Fraser River catch was 18 cents per pound. It is of interest to point out that the contract price paid in 1954 for the study area chum salmon was 8 cents per pound round weight.

One of the highlights in the management was the return to the Big Qualicum River development project. The total chum salmon return to the Big Qualicum river was estimated during the season using tag and mark data to far exceed the spawning ground requirements. To achieve a desirable escapement, the Big Qualicum River chums were subjected to 14 days fishing in Johnstone Strait and an additional 13 days in Area 14. A tentative evaluation of the data indicates that the total B.Q.R. chum salmon returns was 400,000 of which 300,000 to 330,000 were taken by the commercial fisheries.

Low water levels were characteristics for most escapement areas during the first half of the season. However, most sub-areas reported sufficient escapement in the streams for the existing water levels with additional escapements behind the boundaries. It is anticipated that the final study area escapement will be equal to or greater than 1,000,000.

D. Anderson

CANNERY SURVEY, 1972

During the commercial exploitation of chum salmon in southern B. C., a survey of various Lower Mainland canneries was undertaken in a joint effort by the Johnstone Strait-Fraser River group and the Strait of Georgia group. This was the sixth year in which cannery sampling has been used to estimate the commercial contribution of chum from the Big Qualicum River Project. Because of the unusually large chum run this year, approximately 1000 man hours were spent at five fish processors but chiefly B. C. Packers, Steveston and the Canadian Fishing Co., Vancouver.

The survey involved the observation and sampling of the incoming salmon as they were unloaded, as they passed through the canning operation, but mostly as they were processed for the Fresh and frozen fish market. Scales were removed from random samples of fish for age determination and salmon were checked for the absence of various fins--i.e. adipose, left ventral, right ventral, and anal. These fins had been clipped with surgical scissors from fry at the Big Qualicum Project 2.5 to 4.5 years previous. Scales, orbital-hypural lengths, and sex of these marked adults were collected. By the end of the survey 289,730 chum had been observed for missing fins; 11,710 scales had been removed, and 2,082 marked fish had been found.

Cannery sampling provides very important information to the Fisheries Service, for information gained from these marked fish was used to calculate the commercial contribution of Qualicum stock. Evaluations of projects such as the Big Qualicum are not only of value scientifically but economically are necessary to justify such large outlays of public money. Cannery sampling of Qualicum marked fish provided valuable information for the Johnstone Strait fishery. It provided information on the timing and strength of the Qualicum stock, the only specific information available on various stocks passing through Johnstone Strait. This information is useful in managing the fishery to maximize the exploitation of the Qualicum stock and still provide an adequate escapement to the spawning grounds while protecting other, more depressed stocks.

Some interesting information was obtained in this survey. Observation of chum salmon caught in the Strait of Juan de Fuca yielded a number of Qualicum marked chum. From this information though sketchy; 30,000 Qualicum chum are estimated to have passed through the Strait of Juan de Fuca of which 10,000 were caught in the fishery. Most of the chums passing through the Strait are bound for the Puget Sound area with some Fraser and Cowichan stock as well. In past years only small commercial catches (1951-1971 mean 18,300; range 1,500-37,300) have been made in area 20. However, this year, the catch was approximately 190,000. It appeared that this year some chums which normally pass through Johnstone Strait entered via the Strait of Juan de Fuca. Other salmon species are also known to use this dual approach.

Observation of Fraser River caught chums has yielded a number of fish with missing adipose fins. This confirms data from other years that the rate of naturally missing fins is about .01%.

The observation of the thousands of chums also showed various anomalies. One fish had what is known as crinkleback disease, a deformity of the backbone, which causes the fish to swim in an erratic manner. Fry with this deformity are quite common, but normally few survive to adults. Another fish had an extra dorsal fin, fully formed and situated just anterior to the adipose fin. One fish had the two ventral fins joined to form a single fan shaped fin. Still another had what appeared to be two mouths which is a condition caused by the separation of the bottom of the mouth and tongue from the lower jaw.

It is also interesting to note that the salmon are completely utilized at least, at B. C. Packers. Roe is washed, brined and packed for shipment to the Japanese who consider it a delicacy. The milt is also canned for human consumption. The heads and viscera are reduced to fish meal and some heads are exported to a company in Washington.

D. Bailey

In the Caribou Sun, a supplementary issue of this paper, we mentioned that through the prolonged illness of Charlie Anderson he became slightly demented. We are now glad to note that he has entirely regained his health, and is in perfect state of mind.

YUKON MIDNIGHT SUN JUNE 11, 1898

Your morning smile

A civil service employee was applying for a position in the diplomatic corps.

"What makes you think you are qualified?" he was asked.

"Well," he replied modestly, "I've been married for 30 years, and my wife still thinks I have a sick friend."

COUNT YOUR BLESSINGS....ONE

As a casual involved in chum sampling at the canneries, I became involved in a production line arrangement. Working on the fresh fish line involved standing behind the employees as they removed the heads and viscera and checking for missing fins. Although a very efficient and speedy operation, one must be prepared to be inundated with slime, blood and gore. The survey is not for the weak stomached. This coating is not easily removed and more than one washing of clothes in lysol laced water is necessary to remove the smell. After a few hours of standing observing fish, eyes become strained, feet ache, thumbs become sore from punching a counter, and the smell begins to do funny things to the stomach. I slowly began to hate salmon.

Assembly line production was evident everywhere--from the cleaning and filleting of many species of fish to the canning and packaging of the end products. This was one of my first tastes of assembly line production, and the experience confirmed my opinion that this sort of permanent employment would not suit my palate. However, one was consoled by the knowledge that the survey was of short duration and one's efforts would soon be diverted to other activities.

Working as a casual in the Fisheries Service is a precarious position; the wages are adequate but not great, and the threat of being laid off is always imminent. But seeing a production line arrangement such as this and meeting fish cleaners with university degrees helped me to appreciate my present position. The camaraderie of associates, the usually varied and interesting work, and the knowledge gained outweighs the disadvantages. Most of us are guilty of complaining about our employment; perhaps it is time to consider how lucky we are.

D. Bailey

23 ANNUAL NORTHWEST FISH CULTURAL CONFERENCE

On November 30th - December 1st a north-south contingent attended this conference in Seattle, Washington. As in previous years, most of the talks presented were concerned with the artificial propagation of Pacific salmon and steelhead trout. Some of the subject areas that were covered are:

- Studies on the effect of time and size at release on survival rates of hatchery produced fish.
- Studies on fish nutrition.
- Studies on fish disease problems (there were fewer talks presented on this subject this year as compared to previous years. I am not sure whether this indicates a decrease in the number of problems or a decrease in interest in fish diseases).
- Studies on fish marking such as new developments in the use of coded magnetic wire tags and the latest in space-age technology, a talk entitled "Zap!" A practical application of the laser for marking fish.
- Studies on incubation boxes for chum, pink and sockeye salmon.
- Studies on brackish water rearing and the marine pen-rearing aspect of aquaculture.
- Studies on the re-conditioning and reuse of hatchery water.

Fisheries Service staff attending this conference found the talks very interesting and took the opportunity to confer informally with many of our U.S. counterparts.

F. K. Sandercock.

New for 1973 HATCHERY MANAGERS UNIFORM (STD)



INCHES CREEK EGG PLANT

On December 7th, some of the office-bound womenfolk were treated to a field trip. Joyce Chubb, Peggy Christie, and the writer were invited by George Wilson, biologist, to watch the egg planting of the incubation boxes at Inches Creek.

We arrived in time to see the men involved in the egg take throw their mitts into the stream, leave them there a few moments, and then put them on. (The temperature that morning was 18 degrees and a brisk wind was blowing.) Asking about the purpose of this ritual, we learned that they were thawing their frozen mitts so they could put them on! The mitts were used primarily to get a grip on the fish, not for warmth.

The first operation was to kill several mature male and female chum salmon (being held in traps) and hang them, tail up, on a rack to drain the blood out of the body cavity. The eggs must not have blood mixed in with them, or they cannot be fertilized. The salmon were killed by clubbing them on the head with a billy club or wooden mallet.

After several salmon had been killed and drained, the females were slit open and emptied of eggs into a plastic bucket. At the same time, milt from a male salmon was squirted on to the eggs.

The eggs were "washed" with creek water to rid them of the excess milt, and then covered and the pail set in the creek so they could "water harden". This, George Wilson explained, was to make the eggs more resistant to damage when planted. Eggs after fertilization absorb a certain amount of water and then become quite firm.

While the eggs were hardening (a process that takes 1 to 2 hours) the men took lengths and scale samples from the spawners. George Wilson explained the incubation box to us. The "box" is wooden, about 5' x 11' x 5'. The water supply is pumped to the box by an ingenious design of motors and emergency back-up pumps, all seemingly fool-proof. Water comes up through a screen at the bottom and filters through the gravel to the top of the box and then drains off. About 500,000 eggs can be planted in this box, although only 170,000 had been planted so far.

The actual egg plant is quite simple. A container of eggs is gently emptied on to a layer of gravel, and another layer of gravel is then put on (the water hardened eggs are quite resilient at this stage and dumping gravel on them is relatively harmless). About 17 layers of eggs is the maximum in an incubation box. It seems impossible that the eggs on the bottom will hatch and that the fry will swim up through so much gravel to the top. But they do. Mr. Wilson says the egg to fry survival is from 69 to 95 percent, compared to 5 to 10 percent in nature.

M. Haugen

THIRD CROSSING IMPACT STUDY

From August 15 to September 15 this year, the Fisheries Service conducted an ecology study in the Vancouver harbour area of Burrard Inlet. The two Fisheries Divisions involved were the Fraser River-Johnstone Straits-Juan de Fuca and Gulf of Georgia Divisions. The study was the Fisheries contribution to a multifaceted investigation into the impacts of a proposed third crossing of Burrard Inlet. Biologist G. A. C. Wilson directed the Fisheries input.

Sampling throughout the area was done by purse seining, beach seining, gillnetting, longlining, trapping and scuba diving. The bulk of the purse seining was conducted from the 28 foot drum seiner "R.D. 104". The technical personnel concerned were pleasantly surprised when it became evident that the study area supported an extremely varied flora and fauna. Everything from Coryphopterus nicholsii to Xiphister mucosus was recorded in the area. There is every indication that the harbour is a very important rearing site for young chinook from the Capilano River. Adipose fin clipped/nose tagged chinook fingerling from the "Cap" hatchery were recovered from Ferguson Point off Stanley Park to Centennial pier. Age "0+" herring were found throughout the study area. Estimates of herring tonnage ran up to 2000 tons. Thirty-five species of fish were enumerated in total.

Surprisingly, the harbour area is still relatively clean. How much longer Coal Harbour will remain so without preventative care remains to be seen. Already one small area in Coal Harbour has the appearance of being stagnant. At present two small sewers, two yacht clubs, the naval base and numerous "live-on" boats are discharging raw sewage directly into the harbour. If, in the future, the present third crossing tunnel proposal is unfrozen, Coal Harbour, without treatment will rapidly deteriorate into a giant sewage settling basin. (If anyone is still not familiar with the Swan-Wooster proposal, the model of the crossing proposal is on display in the lobby of the Board of Trade Building.)

Three dogfish and one cabezon (giant marbled sculpin) from the harbour were analyzed at Cypress Creek for mercury. The levels in the dogfish ranged from .51 p.p.m. wet weight in the gills of one fish to 2.28 p.p.m. wet weight in the meat of another. The cabezon had a level of .64 p.p.m in the liver and .29 p.p.m. in the meat. (.5 p.p.m. wet weight is the maximum permissible level for human consumption. While these levels are high, they are not inconsistent with other samples taken in the Gulf of Georgia).

Other non-technical facets of the program made the study an enjoyable one. The colour and variety of bikinis along the Stanley Park beaches in August is indeed interesting. Apart from the abortive mutiny on the "R.D. 104", (when Capt. R. W. Armstrong discovered he had forgotten to provision the vessel with other than jellied canned chicken) it was quite an experience to purse seine in the landing approach of Air West's Twin Otter!

B. Allen

SYSTEM E PROPOSAL

Since 1948, the governments of Canada and British Columbia have been conducting investigations to determine the engineering and economic feasibility of a partial hydro-electric power development of the Fraser River that would provide for flood control throughout the basin, especially in the lower mainland area.

The most recent group of hydro-electric power and storage projects was proposed in 1958 and designated as System E. The project locations, eight in all, are located in four sub-basins of the Fraser River; the upper Fraser River, the McGregor River, the Cariboo River and the Clearwater River. In a report published in 1963, the effects of System E on other resources were examined by interested governmental agencies. The most intensive of these studies was that conducted by the Federal Department of Fisheries to determine the effect of the proposed development on the salmon stocks of the Fraser River and its tributaries.

In May of 1968, the federal and provincial governments signed an agreement which formed a new board designated as the Fraser River Joint Advisory Board. In 1970, the Ecology Committee, made up of various provincial agencies such as the Fish and Wildlife Branch and the Department of Agriculture as well as the Fisheries Service of the Department of the Environment was formed.

These agencies were responsible for determining the effects of System E on specific resource interests. The Environmental Quality Unit of the Southern Operations Branch began the fisheries investigations in 1971, based on terms of reference prepared by the Ecology Committee.

Biological field studies were carried out in the summer and fall of 1971 and 1972, the main purpose being to ascertain the present spawning abundance and distribution of salmon within the affected sub-basins and in downstream areas as well as the potential capacity of each sub-basin. Much of the survey work was done via helicopter due to the inaccessible nature of most of the areas and the time constraints involved.

Preliminary conclusions indicate that the storage and power dams comprising System E will directly affect the spawning grounds of a number of moderate runs of spring salmon and smaller runs of sockeye and coho salmon, as well as extensive potential spawning areas. The more subtle environmental changes that may occur in downstream areas are more difficult to evaluate and as a result the magnitude of the losses in these areas has yet to be determined.

Methods of mitigation such as hatchery facilities are being examined for each of the affected sub-basins in order to compensate for the expected losses. The report is due for completion early in the new year.

B. Cox

the LATE SPAWNERS

A Product of an Illicit Affair—for Adoption

- 4 puppies left.
- mostly black with white chest markings
- Lab-Newfoundland cross (with others suspected)
- mother - good temperament
- father - opportunist
- available end of December to good homes
- call Bob Delury, 666-3146

IS THAT ALL
YOU EVER THINK
ABOUT

COLD CURE

Dr. Raymond Zarins, Toronto: "If the condition was significant I might take penicillin. Otherwise, I'd take home a bottle of Scotch, hang my hat on a bedpost, get into bed and drink until I could see two hats. Then I'd fall asleep and in the morning my cold would be gone."

DANNY BOY

Ed Zyblut and his wife Dorothy welcomed a new arrival to their family. Baby Daniel is growing like a weed, says our anonymous tipster. Our tipster, by the way, couldn't remember Danny's middle name(s), or his birthday -- sometime in November. Congratulations are also due Ed in his new position as the Skeena-Nass River Biologist.

SQUAMISH FISH

Cold water trickled down my sleeve as I struck at the lure grabbing bottom. Damn ! I retrieved, sharpened my hook and sailed another cast into the rain. The brown water coldly pressed my waders tightly to my waist as I shuffled slowly downstream, dug my heels into the gravel and waited for a strike. It was early November, the trees were naked, and it had been raining for a week, a good time to fish for northerns. I was fortunate to have this spot to myself. A mile of old skid road gouged by four wheelers, filled with rain, leaves and mud, was discouraging to most.

I pulled my rain hood back to hear above the rain. Squish ! Squish ! Hell ! .. Someone is coming. Three elderly gents, arms linked together like a comical trio of drunken seamen dancing to the Sailors' Hornpipe, slipping and bobbling they came. Each one falling in turn, only to be picked off his feet by the others before he fell in the muck. Sitting on the mud bank, they readied their tackle, looped arms again and incredibly picked and stumbled their way over sunken debris in the waist-deep water. They separated, the middleman staying where he was; the upper and lower men spacing themselves thirty feet above and below him. Not taking any notice of me they began.

I turned my back into the current, leaned on it and assessed my intruders. Ha ! I thought. Bet they are soaked in that crazy raingear get-up. Look-it the cheapo Mickey Mouse gear they got, straight from the J. A. Pan Company for sure and they're casting like a pack of old ladies. I looked at my Ambassador reel, handled my custom-made rod. I felt smug as I turned and whistled a cast almost across the river. I was confident again. Three taps on the bottom and a strike, the fish sailed clear of the water and was gone. I grinned, I'd already released three.

The lower man leaned into a fish that was boiling in front of him. There was a whine like a mix master as it peeled off the line. Between him backing up and the fish going out things couldn't last too long. Crack ! The fish exited, line and all.

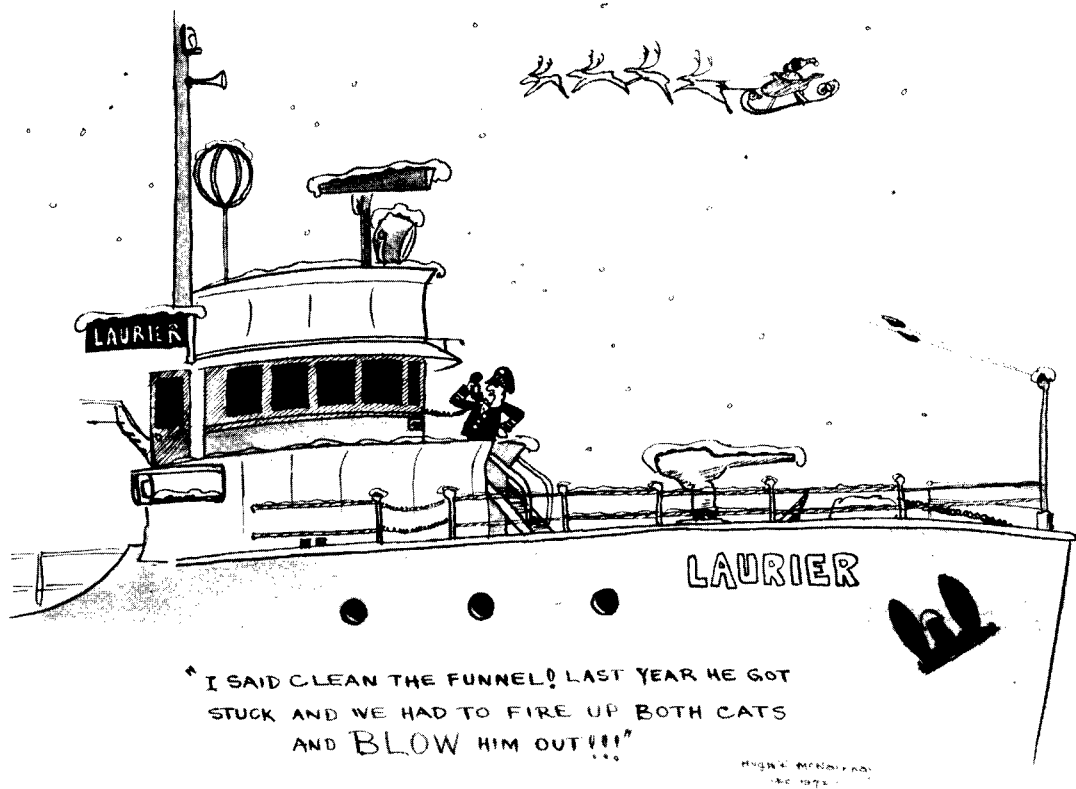
The upper man wasn't long either. His fish struck, ran, and popped off his spinning reel spool that neatly took off his bottom two guides before dropping into the murky water. With two down and out on the bank, I thought, "It won't be long and I'll have my fishing spot to myself again."

The middle man cast aimlessly plop, plop, ...bang ! his fish was off and running, leaping, dodging. He stood rooted to the spot and cranked and cranked. Soon the fish was beat, his partner rushed into the water and clumsily netted it in a trout net. He put the coho into the outstretched arms of the middle man who clung to it like a long-lost friend, mumbling and patting it through the net like he was playing some strange musical instrument. Jeez, I thought, the weirdos one reets fishing.

I wasn't about to be outdone by no Johnny-come-lately Scissor Bill. I continued, he continued. We both lost another one apiece. The next one was his, a buck with short powerful runs. Mine struck at my feet, and in the first run it cleared the river. With my rod high I played my fish over the middle man and downstream. I played it in and konked it. As I started up the beach, the middle man was now ashore, clutching his second fish to himself, patting it, mumbling and grinning. I could clearly see his first was about eight pounds and the one he was fondling maybe ten. I looked at my fish and decided it was time to be acknowledged, so I sashayed up the bank nonchalantly, swinging my beautiful fifteen and a half pounder. "See ya gotta coupla SMALL ones." The middle man stopped his feeling and said, "They are my first ever."

My fingers got kinda strained at this point, holding that monster and all. So for comparison's sake I conveniently laid it next to his eight. "Sure is a difference in size when you put them side by side." I said probing for a touch of praise or recognition. He reached out and touched my fish. As I saw his gestures my mind recoiled. They were those of a blind man, yes indeed, stone blind. As I walked back on the road that rainy November day I saw it all clearly. The arms linked together, clutching fish, aimless casting, and I saw how I had misjudged. It isn't casting technique, or Mickey Mouse equipment, custom rods, or those made in Japan that make up the fishing experience, but it is the people behind them. I guess my fish was just a fish and not so big after all.

J. Kambeitz



JANUARY

MON11HOLIDAYGROAN	WED17
TUE2	THU18
WED3	FRI19
THU4	SAT20
FRI5	SUN21
SAT6	MON22
SUN7	TUE23
MON8	WED24
TUE9E.Q. MEETING AT TSAWWASSEN	THU25
WED10	FRI26PAY DAY
THU11	SAT27
FRI12PAY DAY	SUN28
SAT13	MON29
SUN14	TUE30
MON15	WED31
TUE16	

THANK YOU

This is the time of the year for thank you's. First, we would like to thank all who contributed to the SOUNDER and the old N.O.B. NEWS. Don't stop now! We are grateful also to the typists, Kate, Carolyn, Leilani, Edna, Christa, Judy and Pam, who have been known to type through their coffee breaks to get the articles typed on time. Prior to Joe Kampeitz' arrival as Technical Editor for the SOUNDER, we had to do the layout of the paper, (with the help of draftsman Jerry Fung), which seemed to take the better part of a week to assemble. Sometime now, Joe can put everything together (and neatly, too) in less than half a day. He is largely responsible too, for the attractive new format of the paper, and some of the cartoons. And a special thanks to Alice Sunderland, who gave the SOUNDER its name.

The SOUNDER staff wish everyone a wonderful New Year, and we hope to be hearing from you soon!