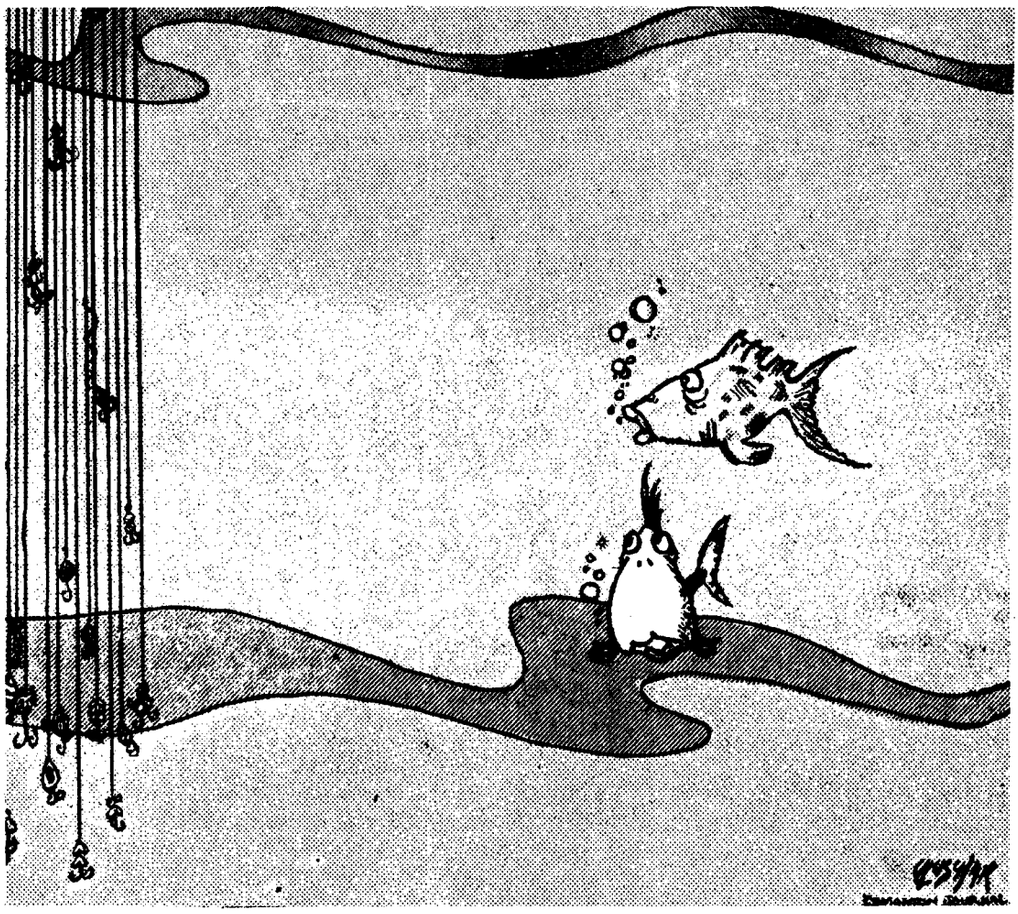
Sounder

MAR.-APR. 1977 Vol. V No. 1 Fisheries and Marine Service



"This must be the end of the 200-mile offshore fishing limit."

BABINE RIVER
1976 COMMERCIAL JACK SOCKEYE HARVEST

For the second consecutive year, the Babine Lake Indian Band was granted a permit to commercially harvest jack sockeye--known by local natives as "tal-lock" The harvest was overseen by Bob Leamont of the Fisheries Service and under the general supervision of Bob Ward, a Royal Fish Company representative, harvesting began on August 20 and terminated September 10.

The crew, which consisted of members of the Lake Babine Indian Band, was divided into two shifts, 0600-1300 hours and 1300-2000 hours, with each shift being manned by approximately eight persons (this varied from day to day, depending on the workload).

The jacks were dipped directly out of the enumeration traps on the Babine

Fence with the use of small dip-nets.

They were then dumped into large plastic containers which were then taken to a refrigerated trailer where the jacks were iced down in the round. As each trailer was filled (approximately every second day), another was trucked in, and the loaded one (averaging 13,800 pieces) was then taken to Prince Rupert (Royal Fish Co.) for processing of the jacks. The finished product was bought and retailed by Woodwards Stores.

The permit issued for the harvest was for a total of 100,000 jack sockeye, but this was increased when it became apparent that the numbers of jacks returning were greater than first anticipated, and the degree of success at capturing the jacks was almost phenomenal (58% of the migration during the 22 day period.) The total harvest for 1976 was 124,332 jacks (49% of the total Babine jack escapement).

During the harvest, random sampling of the catch was carried out on a daily basis to check the mean length and weight of the fish taken. Based on the total catch, the mean length was 37.2 cm nose-fork length (14.6 inches) and the mean weight 543.34 grams (1.2 pounds)per fish.

Robert Leamont

HALIBUT QUOTAS REDUCED FOR 1977

The International Pacific Halibut Commission (IPHC) announced at the conclusion of its Fifty-Third Annual Meeting in Vancouver, B.C., that halibut catch quotas for 1977 would be 22 million pounds, 3 million less than in 1976.

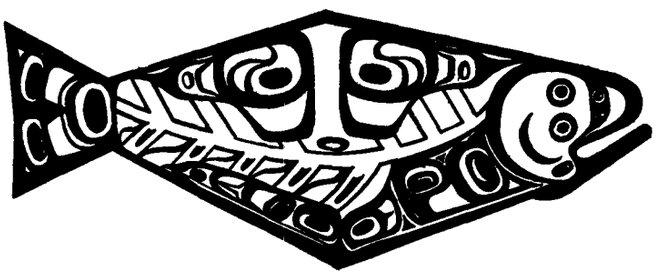
Mr. Clifford Levelton, Chairman, from Ottawa presided at the meeting. IPHC is responsible to Canada and the U.S. for management of the halibut fishery from California to the Bering Sea. The Commission reviewed the halibut fishery of the past year, the research conductioned by its scientific staff, the views and recommendations of Canadian and U.S. halibut fishermen and processors. In Area 2 (south of Cape Spencer, Alaska) and in Area 3 (the Gulf of Alaska), the Commission set 11 million pound catch limits. In Area 2 and in Area 3A (Cape Spencer to the Shumagin Islands) and Area 3B (Shumagin Islands to 175°W), the Commission set a succession of fishing seasons for 1977 as follows:

open on May 10 and close on May 29,
open on June 16 and close on July 4,
open on July 20 and close on August 7,
open on August 23 and close on Sept.10
or when the catch limits in each area are taken.

The sequence of fishing seasons was adopted to replace the voluntary fleet lay-up program which has been discontinued in 1977.

Area 3B will reopen on September 15 for an additional 18-day fishing season without quota. In Area 3C (the Gulf of Alaska, west of 175°W longitude) and in Area 4 (the Bering Sea, west of 175°W longitude), the season will open April 1, 1977 and close November 15, 1977. In Area 4, east of 175°W longitude, the season will open on April 1 and close April 21, 1977 and reopen 10 days after the close of Area 3A and remain open for 21 days, with the exception of the halibut nursery area in the eastern Bering Sea which is closed to halibut fishing at all times.

The sport fishery for halibut will open on March 1, 1977 and close on Oct. 31, 1977. The daily sport catch limit is two halibut of any size. The sport fish regulations are the same as in 1976.



The official regulations will be published and distributed in April, after adoption by the two governments.

The Commission reported that the stocks of halibut are far below the productive capacity of the stocks and that the abundance continued to decline in 1976. The reduction of the quota in 1977 is necessary for conservation of the resource. The restrictions on foreign fishermen in the Bering Sea will be extended 2 weeks in 1977, lasting until May 31, a date negotiated by the governments of Canada and the United States. The combination of reduced incidental halibut catch by foreign fishermen and the severe restrictions on Canadian and U.S. halibut vessels is necessary to rebuild the halibut resource. The commission is encouraged by the progress of the two governments in implementing programs for control of foreign fisheries in their new zone of fisheries jurisdiction that will afford more protection to the halibut resource.

The Commission also recommended that Canada and the U.S. consider other methods of reducing the incidental catches of halibut by trawlers.

The next annual meeting of the Commission will be held in Seattle, Wash., in January 1978.

RECOMMENDATIONS FOR THE

1977 PACIFIC HALIBUT FISHERY REGULATIONS*

1. Area 2 will have an 11 million pound catch limit and a succession of no more than four fishing periods alternated with closed periods. The fishing periods are as follows: open on May 10 and close on May 29, open on June 16 and close on July 4, open on July 20 and close on August 7, open on August 23 and close on September 10 unless the quota is taken previously.

2. Area 3 will have an 11 million pound catch limit and except for Area 3C will be open for fishing during the same fishing periods as Area 2 or until the catch limit is taken.

3. Area 3B will open and close with Area 3A during the regular fishing season and will reopen on September 15 for an additional 18-day fishing season without quota.

4. The opening time in Areas 2 and 3 will be 1500 hours and the closing time will be 0600 hours, Pacific Standard Time.

5. Area 4, east of 175°W, will open for a period of 21 days from April 1 to April 21 and reopen 10 days after the closure of Area 3A and remain open for 21 days.

6. Area 3C and Area 4, west of 175°W, will open on April 1 and close on Nov.15 regardless of attainment of the Area 3 catch limit.

7. Area 3C and Area 4 will open and close at 1800 and 0600 hours, Pacific Standard Time.

8. The minimum commercial size for halibut caught in all areas is 32 inches as measured from the tip of the lower jaw to the end of the middle of the tail with head-on and 24 inches as measured from its most anterior point of the base of the pectoral fin to the end of the middle of the tail with head-off.

9. The Commission will attempt to provide at least 12 days notice of final closure in Area 2 and at least 18 days notice of final closure in Area 3.

10. The sport fishing season for halibut will open on March 1 and close on Oct. 31 and the daily bag limit and the possession limit of sport-caught halibut will be two fish.

11. It is unlawful for vessels fishing for species other than halibut to have halibut aboard in areas closed to halibut fishing.

* Pending approval by Canada and the United States, the regulations will be published and distributed by IPHC.

Someone, who will remain nameless, has remarked that Finance and Administration (Fin. and Admin.)(Fin an' Addies) is never mentioned in the Sounder. This could be because the Fin an' Addies have not impressed a member of the staff to act as their PR type. Should they decide to take up this inferred suggestion, the following Position Analysis Schedule may prove of some use.

NOTICE BOARD

POSITION ANALYSIS SCHEDULE

Branch: Fin an' Addy
Section: PR
Location: Usually behind a Coffee cup
Position Title: Investigative and Reportorial Controlsperson

JOB OR POSITION SUMMARY

Under loose direction, pokes, pries, pushes, and peaks for literarilly acceptive newsworthiness and assembles same in scriptographicological sequences for prepublicatory editoralization.

SPECIFICATIONS

Knowledge
Education and Experience

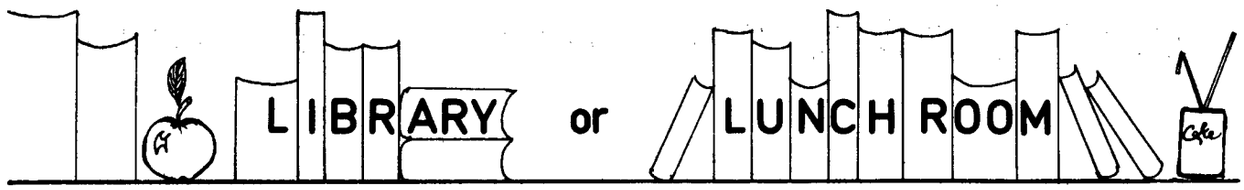
The work requires a working knowledge of the alphabet in correct or nere correct vowel-consonant assemblage intersperced with punctuatoral inscriptives.

PECKING ORDER

Submits all manuscripts to the editor cum censor of the "Sounder".

John Robinson

Christmas 1976



I thought our library was for books,
and readers, all assorted,
But when I chanced to use it,
oh the looks!
And soon my research task was quite
aborted.

'Twas early afternoon,'tween twelve
and one,
And I had come to work, my lunch hour
done.
But such a crowd had gathered there,
I scarce was able to secure a chair!

But oh! the fair sun shone; today I'm
lucky.
Those seatless go, who are not brave
and plucky.
And so I turned my thoughts to
printed matter,
Or rather, tried to, amidst incessant
chatter.

Another bloke was seated at a table,
Coping as best as he was able.
Methinks he was a student
Who surely thought it prudent...

To say nothing, though he couldn't
concentrate.
He likely feared they might become
irate,
Should he be so bold as to suggest
They tone it down or give their jaws
a rest.

This is more than a little quibble,
I'm tired of you folk who munch and
nibble.
Where are your brains? Where are your
manners!
This wasn't the aim of the library
planners.

Here is the message, what this is about;
Don't be indignant and don't go & pout,
But, if you must chatter and if you
must feed,
Please go somewhere else, for we've
come here to read.

The above refers, of course, to the ridiculous situation on the 9th floor in which a handful of rude, noisy and inconsiderate people have, in the absence of adequate lunchroom facilities, commandeered the library as their own personal lunchroom.

Many people must use the library frequently in the course of their work; there are those who would like to do so between 12 and 1 o'clock but cannot as they are faced with limited seating and a modicum of silence in which to concentrate. This same situation often occurs at coffee breaks.

Food has no place in a library; indeed, it is banned in most. People who gather in the library for lunch and/or coffee breaks are usurping valuable space and creating a noisy, distracting atmosphere.

While the "library lunchers" have solved their "no lunchroom" problem (more through ignorance than ingenuity) they have done so at the expense of others; the cost is too high. We, legitimate and valid library "users" are presently being done a dis-service not only by the "lunch bunch" but also by management.

Management is hesitant and reluctant about correcting this situation; it says it doesn't wish to offend, causing hurt feelings or alienation. Rather, it is being evasive; if the library is to be used by "readers" and not "feeders", the larger issue (that of inadequate or rather, non-existent lunchroom facilities) will loom heavily. In effect, management is being manipulated by this handful of people; it accordingly creates for itself an image that is hardly flattering. If we are so internally weak, what strengths might we show externally? If we cannot defend our libraries against the few who would abuse them, can we defend our fisheries any better? Local fishermen will have a heyday on the commercial fishing grounds, poachers sitting at river mouths may become braver yet and I don't even dare to think about the 200-mile limit!

Management; in your silence you not only condone the misuse of the library by a few, you also give it precedence over the proper and justifiable use by many.

Management, you are compliant;
Upon your help we are reliant.
Pull your heads out from the sand,
Face the issues, take a stand!

Please, restore the library!

Linda Jamieson

P.S.

I haven't meant to much offend
And hope effects are not residual;
Though barbed were the words I penned,
I'm agin the group, not the individual.

Pacific salmon

River-born fugitives, red muscled under sheathing silver,
Alive with lights of ocean's changing colors,
The range of deeps and distances through wild salt years
Has gathered the sea's plenty into your perfection.
Fullness is the long return from dark depths
Rendering toll of itself to the searching nets
surging on to strife on brilliant gravel shallows
that opened long ago behind the failing ice.
In violence over the gravel, under the burn of fall,
Fullness spends itself, thrusting forth new life
To nurse in the stream's flow. The old life,
Used utterly, yields itself among the river rocks of home.

Roderick Haig-Brown

1977 Predictions For The Pacific Fisheries

Readers of this news-sheete have come to expect at this time of year my annual predictions of the events for the forthcoming year. In times past I have named names, given the exact time of occurences and in general have been the compleat soothsayer . Some have considered like it a black art of necromancy, or even akin to the reading of auguries as those of a classical education would be Familiar. And yet I have ever declaimed that it is more of an art than a science, the calculation of the declinations of the earth and moon, the configuration of the stars and other events are all necessary. But the greatest thing of it is the ability to Know the various humours of those who are the wheels in the Great Engine of Fisheries.

For my efforts in past years my readers have been amused and sometimes offended so I shall not continue my practise of putting a name and tyme to an event. I shall merely record the events. Tradition in predicting, as in licensing policy, is not its own reward.

In January the unsettled weather in the east evokes a steady stream of visitors from Ottawa which causes many Pacific Region staff to head south in a migration called the US-Canada Bilaterals. It is a sort of Children's Crusade in search of the Holy Grail. Almost all return dusky in complexion but without the Holy Grail.

In February the Minister of Fisheries visits Vancouver amid much hullabulloo. He is photographed next to a Fish. It is unclear what has transpired but all are happy I know not why. Perhaps it is the Feast of St.Valentine and it is a gift from an admirer.

In March equinoxial weather, The stewards of The accounts discover monies in Capital they wish to put into what they call O and M. This is some sort of thieves court which mystifies all but they do what is necessary and congratulate themselves but all are not aware of these successes.

By April much has come about that will shock and amuse, roving bands of footpads and cutpurses cause Fishery Officers great trouble, the fishery for caviar (the spawn of herring which I believe is a great aphrodisiac) has ended and fishermen have new carriages and other finery, the Keepers of the Kings salmon have gone to Court and returned and the annual rumour of re-organization is dusted off by someone on the 11th Floore.

In May it is quiet with good weather; a picnic is planned for June but it discovered that all the ladies who wish to go are unmarried maidens and all the men are severely married. Luckily, it rains on the picnic day and no great sins are committed.

By June month there are flurries of activities about foreign fishing vessel when a fisherman claims a great fleet of Muscovites or White Russians are fishing in the King's waters. The news-sheetes trumpet this about but it is a false alarum. The FLASH people tell and retell of their part causing boredom and promises of promotions.

In July and August an unseasonable cold spell is followed by great heat and a possibility of a drought. The biologistes worry about excapement but the charcoal merchants are pleased as great quantities of salmon and beef are cooked in a process called barbequed.

By September great activities break out in the bilaterals with the U.S., fish are plentiful, there is an Ottawa reorganization and the Pacific Region is saddened by the transfer of people to Ottawa. This goes against their professed philosophy and past practise. Many are puzzled but a wag or jester notes that it is similar to a prize horse being retired to the stud - to produce more bureaucrats.

By October there is much jubilation in the Region, good weather prevails, the industry is quiet, the Minister visits, Ottawa directives are much less and a fishery official is actually complimented for his efforts by the industry. This causes suspicion in some who feel something must be wrong but it is not so.

In November, not much happens, the usual activities butthe weather is still the main subject.

December for a so-so year comes and goes with a rush. Many parties, wassailing, it is discovered that people on the 4th floor can sing. There is the odd promotion very few retirements (a good sign it is agreed by all) and no fights at the Christmas party.

So end my predictions. Those are the events of the year, nothing great or tragic but of such things our life is made. A chronicle of many small events that passes for what we call "life in Fisheries". To all my readers I note that next year I shall again try the practise of naming names but only after I secure a new position.

The Ottawa Correspondent

1977 LICENCING SYSTEM FOR ABALONE FISHING

Landings of abalone have jumped from about 1,000 lbs. in 1956, 1,600 lbs. in 1966 to over 600,000 lbs in 1976.

The high price paid for abalone has attracted more and more operators many of them not really dependent on that fishery for their livelihood.

In an effort to stop this drastic increase in effort, stabilize the fishery and obtain more information on distribution and abundance of abalone along the coast, a limited entry fishery and licencing system will be implemented in 1977.

Starting almost immediately, fishermen harvesting abalone will need a special licence.

In order to qualify for a licence individuals must have operated vessels which landed in excess of $2,000 worth of abalone in 1976 and made more than 50% of their fishing income from abalone. Under these criteria, 17 vessels will make up the abalone fleet. Only one registered fishing vessel can operate under a licence and an individual can hold only one licence.

1977 will be an interim/trial year: licences will not be transferable from person to person; there will be no licence fee; and in 1978, the abalone licence will be applied to a vessel, not an individual.

In addition, other measures will be applied to regulate the fishery. Each licence will permit harvest of abalone by not more than three divers aboard a vessel at any one time. A monthly report of diver hours, areas harvested, and poundage harvested will be required from each licence holder. A daily diver log must be available upon request for inspection. There is no quota set for 1977 but area closures will be implemented with possible total closure after September 30th.

remember

What ever happened to -

Muzz Patrick? Art & Chuck Chapman? Torchie Peden? Daddy Warbucks? Bi[illegible] and Andy Gump?

Remember -

"Gravy ain't wavy"?
Zoot suits & reet pleats?
"L.S.M.F.T."?
"The skin you love to touch"?
"She's lovely. She's engaged. She uses soap"?

Spurious Emissions

Sandy Argue and his troop should be commended for organizing the first successful Christmas Party in years.

There's even money left over for next year. The Empty Stocking Fund received $300 from the proceeds.

* * * * *

Doug McIntyre, ex DCO Queen Charlotte City, has been appointed Government Wharfinger for the Gov't facilities at Porpoise Bay, Sechelt.

* * * * *

Gordie Hunter is leaving the Electronics group to accept a promotion with MOT.

* * * * *

Trudy Chamberlain, Regulations clerk, is resigning and getting married.

* * * * *

Fred Melton is retiring after 28 years of government service.

* * * * *

BIRTH ANNOUNCEMENTS

Gregory Matthew

Born to Bryan and Carolle Allen, February 2, 1977, weight 9 lbs. 7 1/2oz. A brother to Tricia Allen.

Jessica Ann

Born to Duncan and Anne-Marie MacGillavray, December 31, 1976, weighing 6 lbs. 9 ozs.

* * * * *

DEPARTMENT OF FISHERIES

Office of the Supervisor of Fisheries

Prince Rupert,B.C.
July 26, 1935

File: 5-S-5

Dear Sir:

I beg to acknowledge receipt of your letter of the 24th inst., requesting an encumbrance of $10.00 to purchase explosives to open a way through the abandoned dam at Scribner Creek.

Your request has today been passed along to the Chief Supervisor who has been asked to approve of the expenditure immediately if possible.

Just as soon as the authority for this expenditure is received, you will be advised.

Yours truly,

For: J. Boyd,
Supervisor of Fisheries

G.S. Reade,Esq.
Fishery Inspector
Bella Bella,B.C.

PRE-RETIREMENT PREPARATION PROGRAM

For those looking forward to retirement this is a "must" session, sponsored by the Department of Environment to give us some much needed advice and direction to many unanswered questions on retirement. We had a number of speakers under different categories and I will endeavour to cover all in three articles.

Our first speaker was Mr. Les Palmer of the Royal Trust Co., who distributed to us all information from his company with many pamphlets for those contemplating retirement. He touched briefly on the importance of an "up-to-date" will; the Tax Bite on estates in British Columbia: and the sometimes need of a Corporate Executor.

He pointed out the important factor of a budget - that is, a "present" budget listing all monthly incomes, including earned interest, dividends and any other income, and then listed all monthly expenses. These were to include mortgage, taxes or rent, hydro, telephone, cablevision, medical services including dentist, house insurance, car licence and insurance, life insurance, car (gas, oil and repairs), depreciation of car, clothing, Christmas and birthday presents, furniture and appliances, household expenses, household maintenance (upkeep), food, his and her personal spending allowances, savings (which he advocated should be at least 10% of your salary) vacations and then miscellaneous for emergency spending. Then he brought out the "Retirement" budget which covers your various incomes, i.e. company pension, annuity income, investment income, (interest and dividends), and any other income, plus, at the age of 65, Old Age Security Pension and Canada Pension. He recommended these budget figures be looked at very seriously as our life style can change considerably with retirement. He advised us how to prepare for retirement by looking into the various Retirement Savings Plans and Registered Home Ownership Savings Plans. He advised us to try to protect ourselves against many expensive services when retired, i.e., car repairs, plumbing services etc., by taking courses, most of them sponsored by Senior Services Branch; which could cut down on expensive repair work on our homes. Things that should be considered replaced before retirement and are high cost items are the car, household appliances, and major furniture items.

He made himself available to anyone retiring for any advice one might need from his company.

The next article will deal with the Canada Pension Plan and Income Tax.

Pat Phillips

Editor;

Recently in Powell River two Fish and Wildlife officers took what was nearly a "last" trip in the Branch speedboat. Travelling back toward town in Powell Lake on their hard top-caravan bush speedboat they were subjected to carbon monoxide poisoning. They both passed out at exactly the same moment. The boat continued down the lake and ran aground with the engine still running. Fortunately, a passing vessel stopped to investigate, rushed to Powell River and returned with emergency fire department personnel. The doctor indicated that 5 minutes more would have resulted in death.

They had been travelling with two side windows and the canvas open. The exhaust manifold on their inboard engine parted, resulting in release of the gas. The boat was not equipped with a blower.

It can happen to you!!

Norm Lemmen

THE Sounder

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

Sounder

May-June 1977 Vol. V No. 2 Fisheries and Marine Service

Enhancement Funds Committed

The Salmonid Enhancement Program is here! On Monday, May 30th, the Minister announced details of the program. These details will by now be familiar to you all, so I won't dwell on them here. I only want to touch very briefly on some aspects which are of special concern to me.

As Ecclesiastes has said, "there is nothing new under the sun", and this certainly applies to enhancement. In one form or another enhancement has been with us since the first hatcheries were built in Lower Canada and New Brunswick in the 1850's. Several generations of fishery officers, biologists and engineers have been entranced by the thought that the application of fish culture techniques could not only resolve stock depletion problems but also could generate teeming abundances of a highly valued species. The reality, as might be expected, is often at odds with the dream.

A realization that has sprung from our rather tentative and timorous application of enhancement techniques over the years is that enhancement can be potentially damaging unless proper consideration is given to protecting natural stocks. "Manageability" is highlighted as a very critical factor in project selection. As conservors, we can not ignore that our first responsibility is to protect stocks and it is incumbent on us to ensure that our enhancement decisions honour conservation principles.

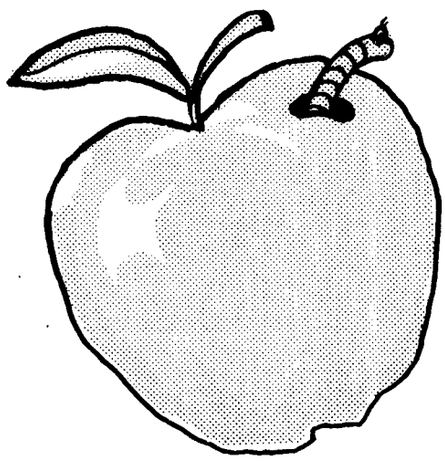
There has been a major concern in

the pacific region that our on-going program of conservation, protection and management has not been getting the dollar and man year support that it deserves. I share this concern and agree that a major shift in Regional priorities is required to correct this problem. I don't agree, however, that the Salmonid Enhancement Program has robbed the on-going program. I am convinced that we would not have any more field officers on staff if the enhancement program was cancelled. The reason I say this is that the enhancement program is competing in a different arena. It competes for cabinet approval with many national programs on such matters as energy, transportation, defence, agriculture, etc. Finance and Treasury Board finds resources either through new funds or reallocation throughout the government departments. Even within the full Department of Fisheries and the Environment the national Zero-base budget excercise creates resources by deciding that certain programs be chopped and certain positions become redundant. Within this context then, enhancement should be looked upon as a major gain for Pacific Region. A concentrated effort, similar to that mounted to sell the enhancement program, is obviously needed to get the protection message across where it really counts - to those who allocate finances at the national level.

The SEP is a major lever of change, a point I have made at every opportunity. I'm not at all sure that the significance of this consideration is widely understood. Indeed, there is a tendency to ignore this reality and, in some cases, to hope it will go away. The management of enhancement is the management of innovation. Of this there is no doubt! The trick will be to manage change, to affect its pace and direction, to manage change is such a way that it is an enriching force in our B.C. community.

The enhancement program is an exciting prospect, one of the few truly positive tools in our bag of resource management tricks. For better or worse the Salmonid Enhancement Program is here. Let's make sure it is for the better.

J.R. MacLeod



Library or Lunchroom -a rebuttal-

In reply to the article published in the Sounder, Mar.-Apr. 1977, Volume V. No.1.

On February 21st a notice was posted in the library stating that it was not to be used as a lunchroom. This directive was honoured immediately after it was posted. The Sounder was received on April 28th. By the time that the Sounder was published the complaint had been registered and corrected. In no way could it be said that "management is being manipulated by this handful of people." Perhaps it was incumbent upon the Editor of the Sounder to check the situation and report on it as well as printing Miss Jamieson's letter.

On reading the article it is obvious that a complaint is being made about the lack of lunchroom facilities in this building. However, to attack one's fellow workers in such a personal way seems rather an unnecessary way to make a point. "Rude, noisy and inconsiderate" are harsh words to use. If Miss Jamieson was trying to bring the "no lunch room" problem once again to the attention of Management, perhaps it could have been done in a less personal and more direct way. The problem of lunch room facilities has been a much discussed issue and it has to be handled by Management-Staff discussion not by personal attacks on individuals.

The actual time that the library was used by some members of the 9th floor as a lunch room, was for half an hour between 12:30 and 1:00. The half hour lunch is strictly observed by this section.

It has been noted by Library staff that the library facilities are not normally used for research between the hour of 12 and 1. The statistics are available to anyone who wishes to see them.

Economics & Special Industry Services - 9th Floor

ECONOMIC ASPECTS of OPTIMUM YIELD

In preparing a presentation for this conference, there appeared little purpose in presenting again the argument for maximum economic yield (MEY). After all, that argument has endured for some twenty years now and still invites the wrath and indignation of proponents for the maximum sustainable yield concept (MSY). Optimum sustainable yield (OSY), as a concept, provides all disciplines with a mechanism for agreement on policy, while not assisting any one discipline in understanding what OSY really means. OSY does not mean maximum economic yield to the economist, nor should it mean MSY to the biologist, since it lies somewhere between these two stated maximums, depending on the specific fishery and the 'players' involved in that fishery. OSY is an approach derived from a blend of biological, economic and social advice within the constraints of political reality. It is sustainable yield that most closely meets the optimum as prescribed by biological, economic, social and political objectives. It is by necessity non-scientific.

OSY is not a new concept to fisheries management in the Pacific Region. It has been practised for 7 years now. This was accomplished in 1969 with the adoption of the economist's primary argument - that the costs of labour and capital involved in the salmon fishery far exceeded the level required to harvest the resource. The implementation of limited entry in 1969 with the three simple objectives of i) reduction of effort in order to facilitate resource management, ii) reduction of over capitalization, and iii) increase incomes to fishermen - is surely an example of OSY, a blend of the disciplines involved.

Permit me to digress further on this example. The implementation of limited entry was a major policy switch in fisheries management. It denied the free access policy associated with most fisheries in North America. This change in policy has been viewed as similar to the Enclosures Act in Britain in C 18, enacted to correct the so-called "Tragedy of the Commons." The same cliche is applied to the free access concept of traditional fisheries management. In effect, the limitation policy established property rights for fishermen, or in other words, the government has granted individuals a privilege to fish that is as negotiable as any other asset.

A further shift in management practices in the Pacific Region associated with the denial of free access is the selection of an objective that intended to increase incomes to fishermen. This objective was to be achieved by fewer fishermen sharing the same catch. Such an objective carried the social implication that the salmon fishery was to change from a welfare program, characterized by welfare type incomes for all concerned. The use of the fishery in this way had also been considered effective for employment and regional economic development.

With a reduction in the numbers of fishermen and a continuing yield of salmon, incomes have increased. Associated with increased incomes to fishermen, the more concentrated wealth, through multiplier effects, stimulated the ancillary industries involved with the fishery, such as ship building, electronic suppliers and net manufacturers, almost creating a whole new industry and certainly a result that can be viewed as effective for employment and regional economic development.

For the cynics, who might ask about the displaced fishermen and the loss of their employment opportunities and for those who can't accept that the stimulation of a secondary industry probably created more direct employment than had been lost, the granting of a free licence or privilege to fish facilitated any dislocation. With the spectacular earnings to fishermen in 1972 and 1973, the value of the privilege to fish allowed fishermen to sell out with a hefty bonus, $25,000 minimum in 1973, and move to other employment or areas where before they were restricted in mobility and choices because of inadequate incomes. Their choice, not the government's.

Today, the salmon fleet size is considered optimal by resource management in terms of trollers and gillnets. Within five years, the seine fleet will also be optimal, after a serious reduction in their numbers.

The single largest problem in terms of OSY for the salmon fishery is, for the biologist, how to overcome the natural instability and fluctuations in yield, and for the economist, how to make price react sufficiently to compensate for the fluctuations in yield. The contributions from both disciplines will bring stability to the industry, a dampening in yield oscillation with increased price responsiveness as compensation to the remaining yield fluctuations. In the case of salmon, MSY <u>is</u> OSY now that economic considerations have been brought in to compensate the effect of fishery

management tools on the individuals involved in the fishery. The reduction in the number of units of effort has permitted an increase in catch, since small discreet stocks are now open to commercial fishing. Previously, these stocks were closed because of the concentrated fleet size.

A second example of OSY practice in the Pacific Region is the management of the Herring fishery. For this fishery, OSY is established from i) the MSY of herring stocks, ii) the plant processing capability and iii) the economic uses of the resource. Given a predicted total allowable catch in 1976 of 165,000 tons of herring, only 65,000 tons was allocated. The remainder of the stock would have been considered as waste under the MSY management concept and the policy would have been to encourage additional harvesting. Instead, the OSY is set at 65,000 tons because the yield was considered the optimum in terms of market supply in order to maximize the revenue to the resource, to maximize processing plant efficiency, and, to provide stability to the gross returns of fishermen without biologically affecting the herring stocks. The unharvested portion of the total allowable catch is considered optimally allocated as feed for rearing salmon to adult size in keeping with sportfishing claims. This last point consciously states that the resource is better left unutilized at the present time, because it avoids a conflict with sportfishermen, and, in fact, probably has more value than if harvested commercially for reduction. Until the relationship of herring abundance to salmon survival has been satisfactorily answered, the sportfishermen's claims cannot be denied politically.

What I have attempted to describe, is the practical application of OSY for fisheries management. It is the mechanism that permits a multidisciplinary approach to a management regime. The need for this mechanism today is critical, due to the complexity that is involved in management of a fishery. The most attractive aspect of OSY is that the various disciplines have joined together without any jeopardy to the ethic of any one individual discipline.

The entrenchment that formally existed between the economist and the biologist in pursuit of a maximum, is now replaced with a common objective to find an optimum.

To the future, the end of the concept of free access to fishery resources, and the establishment of property rights will provide the institutional arrangement for the incentive for individuals and society to invest in the fishery resource. The difficult task will be to meet the challenge of the future and the demands placed on the discipline of biology. Just as the establishment of property rights for land generated a challenge to agriculture, so will there be a comparable challenge to marine biology.

C. Newton

(Taken from an address to the Canadian Conference for Fisheries Research 1976)

THE Sounder Letters to the Editor

Dear Kate:

Just a short note as a follow-up upon returning from the Fisheries Enforcement Course in Regina.

The course was by far the best course I have been fortunate enough to attend, and I would recommend that not only all Fishery Officers take the course, but ALL staff which are designated Fishery Officers be required to take the course.

A sincere thanks to be given to all the management staff who made the course a reality. For this was something which was needed for a long time and will no doubt benefit the Service.

In passing I would like to thank Mrs. Donna Aldous for assisting us in the preparation of our graduation banquet and to all the Fishery Officers on the course as well as the Officers who were home guarding the home front for assisting in providing or preparing the banquet; so that the R.C.M.P. instructional cadre could enjoy themselves and the Service being well presented in work as well as leisure.

I am sure that I speak for all the officers who took part in the course in saying that it was well enjoyed and very informative. It may be of some interest to the readers to know that this course was the first non-police group to utilize the R.C.M.P. academy and I was told by several R.C.M.P. members that they were so pleased with our group that they are going to accept and have other non-police agencies utilize the facilities in the future.

In conclusion again, thanks to everyone concerned and keep up the good work.

Brian A. Richman

The Editor:

On Friday afternoon, March 18, the FPC Tanu came into Queen Charlotte City. They were greeted at the dock by the Hereditary chief of the village of Tanu, Nathan Young. Chief Young was wearing his ceremonial robes with the Eagle symbol on it. Accompanying Chief Young was Captain Jack Robinson of the FPC Arrow Post, Fishery Officer Trevor Morris, Fishery Officer Jim Hart, and the Secretary of the Queen Charlotte office, Mrs. Joyce Palmer.

Captain Monk showed us around the Tanu and Chief Young found the tour very interesting and informative. Following the tour of the ship, refreshments were served in the Officers mess and Chief Young presented Captain Monk with a silver tie-pin with the Raven symbol carved by Gordon Cross, a well known Haida carver, also from the village of Tanu. Captain Monk, in turn, presented Chief Young with a colour photograph of the ship.

Chief Young told some interesting stories concerning the traditions of the Haida people, and in particular about his village of Tanu.

The afternoon was a nice change from the ordinary office routine and my thanks are extended to Captain and crew of the Tanu for their hospitality.

(Mrs.) Joyce Palmer

Dear Kate:

This is the time of year (April) that I, and probably most Fishery Officers, start writing letters and making moves to hire the seasonal patrolmen and guardians for the coming season. It brought to mind a poem entitled "a guardian", printed in the Nov-Dec 1976 issue of the Sounder (Vol. IV No.4).

The poem was certainly descriptive of some of the more outstanding of our seasonal staff, but leaves, I believe, a false impression with anyone who has not experienced the headaches of dealing with some of our more "LUNCHED" individuals.

I felt I must counter in order to complete the spectrum of "character and abilities".

• A Guardian •

Who works for two hours a day
And always cries he's underpaid -
a Guardian
Who keeps the Fisheries in the red
By thrashing boats and motors dead -
a Guardian
Who assesses streams by looking up
And never leaves the salty chuck -
a Guardian
Who wears his badge in to the bar
Like Mathew Dillan's gleaming star -
a Guardian
Who clutching his little bottle of rum
Goes forth half-juiced on his closure run -
a Guardian
Who buys out half of Esso's stock
When Fisheries pays at the fuel dock -
a Guardian
Who causes F/O's to tear their hair
Until there's very little there
Who always seems to get your goat
Cause he's always lashed to the bloody
float - a Guardian.

H. McNairnay
Fishery Officer

BETWEEN FRIENDS

As radio communications do not recognize national borders, nations must share and co-ordinate use of the radio frequency spectrum.

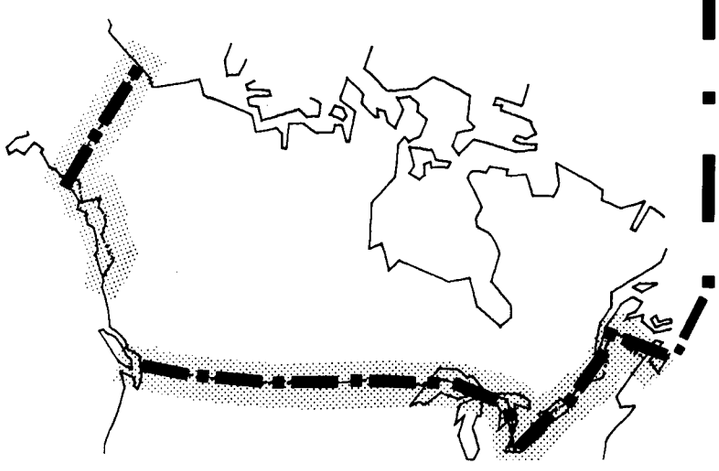
Most of Canada's co-ordination activities involve the U.S. Since the signing of an Oct. 24, 1962, agreement between the two countries, all frequencies in bands covered by the agreement and above 30 megahertz assigned by Canada and the U.S. to users within 120 km of the border must be co-ordinated with the other country. The majority of these frequency referrals concern stations in land mobile systems.

In Canada, co-ordination of frequencies is primarily the job of the Dep. of Communications. In the U.S., four agencies are involved: the Federal Communications Commission, the Interdepartmental Radio Advisory Committee, the Joint Chiefs of Staff and the Federal Aviation Administration.

When one country proposes to assign a frequency, it sends a co-ordination letter to the other country. The letter contains information on the technical parameters of the proposed frequency assignments so the other administration can evaluate the possibility of interference to existing systems or stations.

In the first half of 1976, Canada sent 2,014 co-ordination letters to the U.S. and received 1,720 such letters from the U.S. For the same period in 1975, Canada sent 1,933 co-ordination letters to the U.S. and received 1,347 from the U.S.

Each letter proposed that one or more frequencies be assigned with 120 km of the Canada-U.S. border and gave the recipient country a chance to evaluate the likelihood of interference being caused to its co-channel or adjacent channel users.



Officials in the Frequency Assignment and Licensing Division check proposals from the U.S. agencies against lists of existing Canadian assignments. In cases where compatibility studies indicate interference would result, the U.S. agency involved is advised and usually the agency selects alternate frequencies for consideration by Canada. In some instances when interference is anticipated, the applicant may be asked to set up equipment in keeping with the technical parameters proposed so on-the-air tests may be conducted. A transmission schedule is then worked out between the U.S., Canada and those stations that may be affected by the applicant's transmission.

If there is no interference, the department gives its approval to the American assignment. "If there is interference," said Al Heavenor, the department's chief of Frequency Assignments, "the proposed systems could be redesigned-the antennas of the base station could be lowered to a level that would eliminate interference to other stations, the output power could be adjusted, an omnidirectional antenna could be replaced by a directional antenna-or a new frequency could be found."

Much of the same process occurs when Americans examine Canadian frequency proposals. So far only a low percentage of proposed frequency assignments require adjustment.

The problems in frequency assignment are not solved by co-ordination alone.

The U.S., unlike Canada, designates certain frequency bands, block allocations as they are called, for specific services throughout the country. It may not be possible, however, to use that full complement in the border zone - especially if some of these frequencies are already in use by Canadian stations. Finding frequencies is the biggest problem. Montreal Toronto, Buffalo, Detroit, Windsor and Vancouver all share the problem of a congested radio frequency spectrum.

The present frequency allocation and assignment problems have been a long time

coming. "During the Second World War, for example, very little land mobile equipment designed for use in the VHF and UHF parts of the spectrum was available to civilians," Mr. Heavenor said, "Only after the war did the equipment appear on the market in quantity. Before the 1960's, detailed co-ordination was not carried out between the U.S. and Canada because the bands themselves had only recently been made available for use by land mobile service in Canada and were little occupied. Later when Canada-U.S. occupancy increased it became obvious that an agreement between the two countries was required to avoid interference between Canadian and U.S. stations. At the same time it was desirable to establish a working relationship intended to provide more effective use of the frequency spectrum."

Although most frequency co-ordination is carried out with the U.S. frequencies selected for assignment to Canadian users may have to be co-ordinated with many other countries as well. When Canada selects a frequency in the high frequency part of the spectrum, it notifies the Geneva-based international Frequency Registration Board, an organ of the International Telecommunications Union, a specialized agency of the UN.

(from an article in "60 days")

Sea Otters Return To West Coast

The success of a five year old international operation to re-establish sea otter populations on the west coast of Vancouver Island was recently confirmed for the first time.

Scientists from the Pacific Biological Station at Nanaimo reported sighting several thriving colonies of the animals in the general area where sea otters from Alaska were released in 1969, 1970, and 1972. The transplant involved scientists and technicians from Federal Fisheries, B.C. Fish and Wildlife, and Alaska Fish and Wildlife.

During the recent sighting female sea otters were observed with young, which scientists say indicates strongly that the transplant has taken. Sea otters were captured near Amchitka Island in Alaska for the transplant and were shipped to Bunsby Island area aboard a federal research vessel, the G.B. Reed.

The former abundance of the sea otter, which possesses perhaps the most valuable coat of any furbearer, declined drastically in the 19th century as a result of commercial harvesting. By the early 1900's, only a handful of the animals remained. The last native sea otter was seen on the west coast in 1929. The transplanted sea otter population is fully protected under provincial fish and wildlife legislation.

Sea otters feed on a variety of mollusks, sea urchins and kelp, but variations in their diet depend upon the greatest concentration of individual foods. Sea otters are not particularly fast swimmers. Fish are not considered to be a part of their diet. Abalone, sea urchins and sea mussels appear to constitute their principle food. Sea otters have been observed to float on their backs, place shellfish on their chests and use rocks to pound the shell open. A sea otter can reach 6 feet in length and has been known to weigh 85 pounds.

GUPPY TROOP GOES EAST

It would be impossible to impress a hard-nosed bunch of RCMP corporals and their superiors would it not. Impossible to impress them while playing their own game in arenas like adapting to discipline, human interaction, weaponry and tactical thinking.

Thirty F.O.'s did it.

For 20 days they attended courses at the RCMP Academy at Regina, twenty days studying such diverse subjects as Criminal Law, Federal Statutes, Operational Techniques, Technical Aids, Human Relations, Small Arms, Self Defense, Water Saftey and Cold Water Survival.

It was the first time, really, that the Department had subjected its enforcement staff to professional, impartial scrutiny.

The RCMP Academy is held by some to be the best institute of learning in the land. So to have all 20 of the F.O.'s instructors plus the 2 superintendents and the chief superintendent say how impressed they were with the "guppy troop" was sweet indeed. What seemed to impress them most was their keenness, maturity, and esprit de corps.

During the days, Operational Techniques, (proper note taking, the finer points of care and handling of prisoners, report writing) and Criminal Law (arrest, use of force, giving evidence, obstruction and assault of Peace Officers) accounted for a large part of the enforcement oriented course. Despite the fact that the F.O.'s have worked in the field for a varying number of years, most have never received any formal training in enforcement skills. The course did demonstrate a dire need for this kind of education. These skills were polished in twelve hours of practical training. For this role playing exercise the R.C.M.P. instructors rigged a "violation" at a nearby stream and the situation was followed through from the violation to the court case including actual investigation of the offence, seizing of exhibits, preparation of charges and court briefs and actual presentation of the case in a mock court.

A total of thirty-six hours was spent on Small Arms. Handguns, exposure to shotguns, and use of force were treated in practical and theoretical sessions.

All 30 officers succeeded in meeting D.F.E. requirements for handgun competence. In addition, twenty-eight achieved "crossed revolvers" and twenty-nine received "crossed rifles".

Swimming (water safety and cold water survival) accounted for some of the hours of instruction. Of our officers, two arrived at the Academy being non-swimmers. No non-swimmers left 20 days later.

It was the off-hours activities that showed the mettle of D.F.E.'s "aqua fuzz". There was the F.O. who ran 5 miles each day; the entire class that voluntarily partook of the physical fitness program,

the breathalyzer "dry-run", and the police dog demonstration; the Fisheries basketball team that beat the school staff; and the whole squad going through the rifle qualification course.

Need it be said that all 30 graduated. The Academy even asked if we had another 30 we'd like to send next year, they were so impressed. High praise indeed.

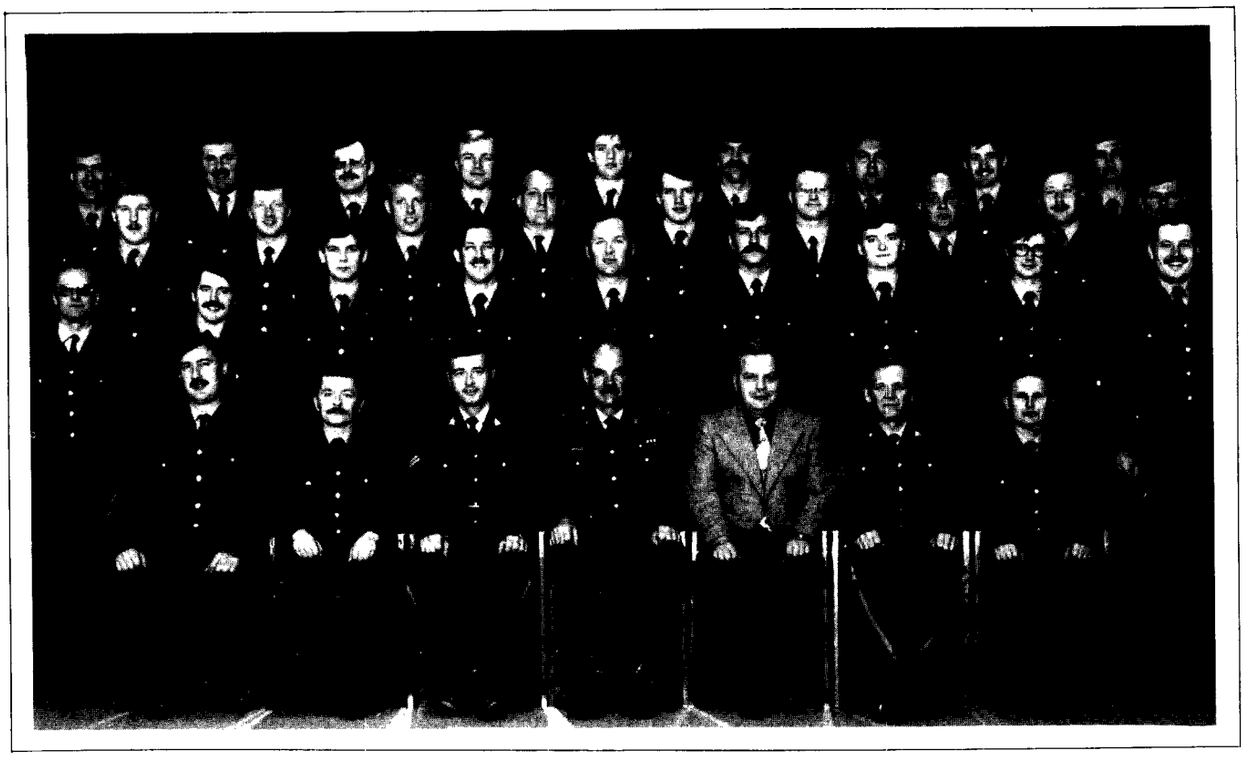
The class hosted a seafood dinner on graduation night (prepared with the help of Donna Aldous) for the school staff and even provided the entertainment afterwards. Of special note was Bruce Macdonald of Kamloops playing guitar and singing. Other F.O.'s (and some RCMP) not quite as gifted as Bruce, took to the stage also.

A portfolio was presented to the Academy as a gesture of Fisheries' appreciation by Dick Crouter (in shirt and tie.)

The Fishery Officers seemed to leave feeling really proud of themselves - and deservedly so.

Thanks to the RCMP for their wholehearted co-operation, and congratulations, gentlemen - an impressive performance.

(picture of "Guppy Troop" on page 10)



Canadian Fisheries Enforcement Course

Front Row: *J.R.M. Stephen; P.T. Woloshyn; H.R. Parker; Supt. W.F. MacRae; C.C. Young; D.M. Roughley; C. Kennedy*

Second Row: *J.A. Krywchuk; G.S. Zealand; J.E. Broome; B.A. Richman; C.B. Covey; E.J. Lochbaum; R.J. Webb; M.K. Farquhar; A.J. Ionson*

Third Row: *W.D. Pastuch; L.K. Enderud; W.A. Robinson; R.P. Kraft; D.R. Ross; C.R. Wilson; J.V. Hipp; L.K. Chambers; L.A. Ottmann*

Fourth Row: *T.D. Turnbull; D.N. Macdiarmid; L.V. Gordon; B.T. Kurtz; W.B. Caspell; G.B. McDonald; W.H. McKenzie; T.F. Fields; R.A. Brahniuk*

Regional Public Service Commission Courses

COURSE	FEE		1977
Accident Prevention	$140		Nov 7-9
Appeals System	300-325		June
Basic Supervisory Training	235		Oct 31- Nov 4
Basic Supervisory Workshop	235		
Career Growth for Adminstrative Support Staff	235		Oct 24-28
		(Kelowna)	Sep 26-30
Coping with Media Interviews	200		Sep 19-23
Financial Management for Non-Financial Managers	155		Jun 27-29
Fundamentals of Budget Formulation and Control	275-300		December
Implementation of Computer Based Systems	300		Sep 7-9

Interpersonal Communication	325-350		
Interviewing, Coaching and Counselling Skills	325-350		
Introduction to Data Processing	200		Oct 3-7
Introduction to Marketing	200		Sep 19-23
Introduction to Surveying	200		
M1 Introduction to Computers	300-325		November
M.B.O. Orientation Seminar	150		Oct 18-19
Management by Objectives Concepts Applications Seminar	325		
Project Management	375-400		October
Records Management	235		Nov 21-25
Safety Management	190-200		April/October
Staff Relations for Managers	300		Sep 26-30
Pay Benefits for Support Staff	235		Sep 12-16
People in Organizations	325		Nov 28-Dec 2
Person to Person Communication	155	(Victoria)	Jun 21-23 Oct 12-14

NOTE: Location is in Vancouver unless otherwise stated. Fees shown are based on 1976 prices. They are subject to slight variation in 1977-78.

HERRING '77

A total of 81,318 tons of herring were landed during this year's roe herring fishery. It was the shortest season ever, commencing on February 27 and closing on March 29th.

Ganges Harbour opened first and in the four days following, 85 tons were landed by 140 gillnetters in Area 18.

Area 23 was opened for gillnetters on March 7th; and in 2 days 3,800 tons were landed in Barkley Sound by 450 gillnets. Although there was an estimated 20,000 tons in the Sound, poor weather conditions kept the catch down.

On March 9th, a 24-hour seine fishery in Area 24's Sidney Inlet resulted in 7000 tons being landed. The next day, 162 seiners in Barkley Sound landed 14,850 tons in 2½ hours under almost perfect conditions.

The next six days brought in over 20,000 tons, most of it from Qualicum Beach, Northwest Bay and Sydney-Shelter Inlet.

Between March 17-23, an additional 10,000 tons were caught: 5,500 tons of it in Area 7; 2,483 tons by seiners and 3,098 tons by gillnetters.

During the next two days 15,000 tons were taken, mostly from Skincuttle Inlet and Kilditdt Sound. The last 6,000 tons were taken in the next few days by seiners in Port Simpson and Kitkatla. The shortest opening of the season occurred in Kitkatla Inlet with 150 seines taking 1,297 tons in 15 minutes. The fishery was completely closed on March 29th.

The quota for the season was calculated at between 80,000 and 85,000 tons. The 85,000 ton figure was based on an estimated market demand of 8,000 tons of Canadian roe, and an expected roe recovery of 9.5%. The actual recovery rate during the 1977 fishery was closer to 11%, hence roe exports may approach 9,000 tons.

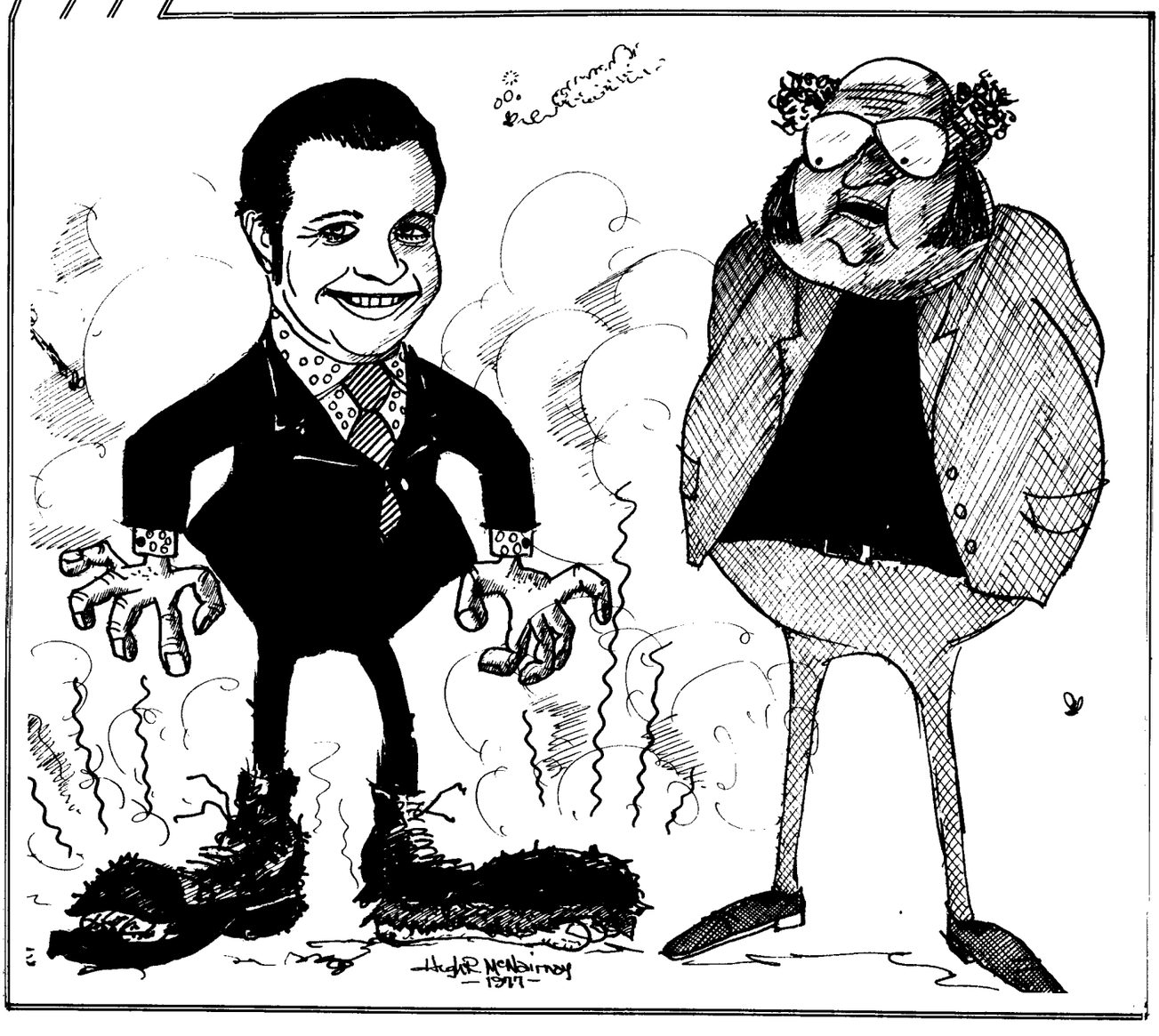
The seine fleet landed about 57% of total landings or 46,300 tons valued at $13,955,500. The gillnet fleet landed about 43% (34,970 tons) valued at $9,966,450.

(References: R.Nelson, D.Meyers, A.Alley)

1975

reprinted from
The Sounder Vol. III No.6

1977



BILL C-38 DEBATE

On May 16th Bill C-38 received second reading in the House. The bill, "to amend the Fisheries Act and to amend the Criminal Code in consequence thereof", then was referred to the Standing Committee on Fisheries and Forestry.

The following quotes are taken from the Commons debates:

Mr. Hugh A. Anderson (Comox-Alberni):

...I applaud the provision giving fisheries officers the powers of peace officers. I understand fisheries officers will be given all the authority vested normally in peace officers, as set out in the Criminal Code .. I clearly understand that a fishery officer often has a difficult time dealing with poachers. If he catches one, he must summon an RCMP officer who issues the warrant, makes the arrest, and so on. Once this bill passes the fisheries officer will, for certain purposes, have all the powers of a peace officer, and for that I commend the minister. I foresee our fishery officers becoming useful instruments for the enforcing of our 200 mile limit.

Allowing fishery officers to act as peace officers in enforcing our fisheries regulations when they monitor the activities of distant water fishing fleets will lead to efficiency in manpower use.... He could monitor the size and type of catch and, if the licence issued by the minister has been contravened, we could in his capacity as peace officer issue the warrant, order the ship to enter harbour, or do whatever else is required in the circumstances.

Since he has the power vested in a peace officer, he need not send for the RCMP, or wait for the RCMP helicopter to put a member of that force on board ship. He has in his hands all the necessary power. I hope the minister will not take offence at my saying that there are not enough fisheries officers, at least in my part of the west coast, to do their job adequately.

I realize that the minister's department is under constraint and may not be able to hire enough staff, the work of which is measured in man-years of employment. His allocation of man-years is frozen, as is that of several other departments. But we must appoint more fisheries officers.....Without adequate staff it will be impossible to monitor the area adequately and assume those additional responsibilities which fishery officers will have to bear on the west coast and east coast of Canada. I trust fishery officers will be able to carry out the additional responsibilites with which they are to be entrusted. I add that they do an excellent job in Canada; they are dedicated, sincere people. I would only ask that their job be made a little easier by additional staffing, especially in the field.

Many times we staff our offices in Ottawa, Vancouver, or Saint John, but we do not staff the field, at least not as much as the bureaucracy.... I feel that sometimes they are the forgotten men of the service. Anything we can do to aid them will be a plus, not only for the government, not only for the monitoring, but for their morale. They are very proud people. They do have a high morale, but we can help them out in that area.

One provision brought in by the minister in his amendment is ticketing for minor offences. This is a very rational move. Up until now, in many cases the fishery officers had to go into court on very petty offences. Our object should be to keep them in the field. They sometimes have to travel 50, 60 or 100 miles from their normal base of operation in order to appear in court, only to find that the person being prosecuted does not appear. That time is wasted.

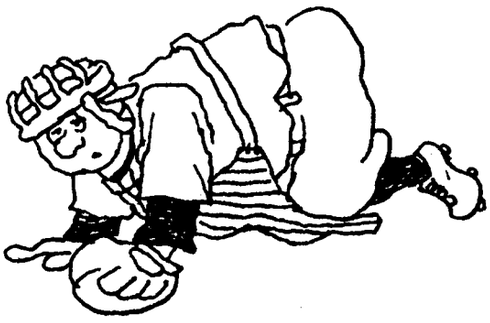
We now have a provision whereby the fishery officers can issue tickets for minor offences, prescribed by regulations. I hope these regulations are given to us so that the committee members can judge what is a minor offence and what is not. In any event, through this regulation a voluntary plea of guilty can be entered and a prescribed fine sent in by the offender. There is no need for the fishery officer to leave his patrol area in order to appear in court on a very minor issue.

Mr. Bill Jarvis (Perth-Wilmot):

...My colleague from Comox-Alberni says that he does not have enough inspectors in his riding but that he does not blame the minister. Well, I do blame the minister, and his predecessors, and the sins of his predecessors must be suffered by him. If I needed more inspectors in British Columbia, I know where I could get them; I would get them from all the planners in the Department of the Environment, these people whose raison d'etre is to say no. That is all they do, and the reason they say no is that if they said yes they would have no reason to exist.

LITTLE-KNOWN MOMENTS IN THE HISTORY OF FISHERIES SOFTBALL (Ottawa Valley Division)

With the Fisheries and Marine Service Mixed Softball League now underway, our Ottawa Correspondent went to the Archives to research some aspects of the famous 1912 Marine and Fisheries team that won the Ottawa Valley division title that year.

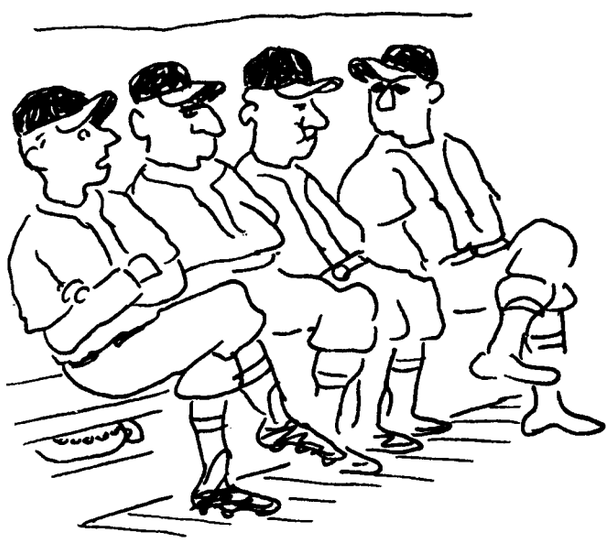


Sandy Finnegen (PM3) catcher, having just been struck in the stomach by a foul ball suddenly decides to end 14 years with Fisheries and to go to work for Supply and Services.

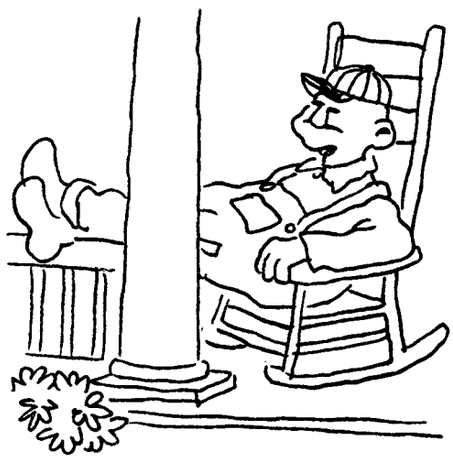
Exhausted after a big night on the town, Artie Schang, (GT2) makes a sacrifice bunt, the first time it is seen in the Ottawa League.

Information Officer Ted Keesing (IS4) typing up the results of a game after he lost his notes.

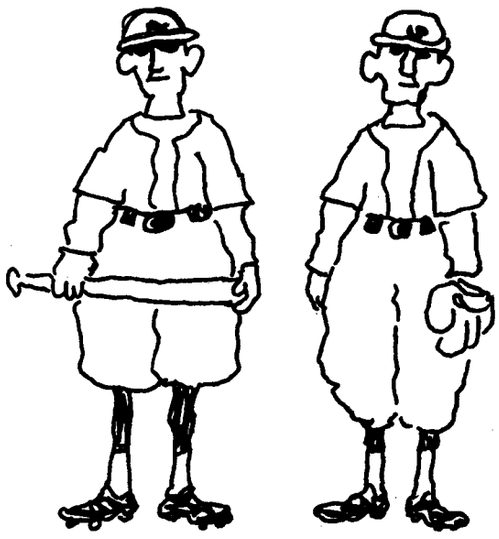
Deputy-Minister Walter T. ("Call me Walt") Morin (DM2) at the moment he said to Ernie Povey (PM4), manager of the team: "We don't want the Sportmanship Award again this year, we want the championship."



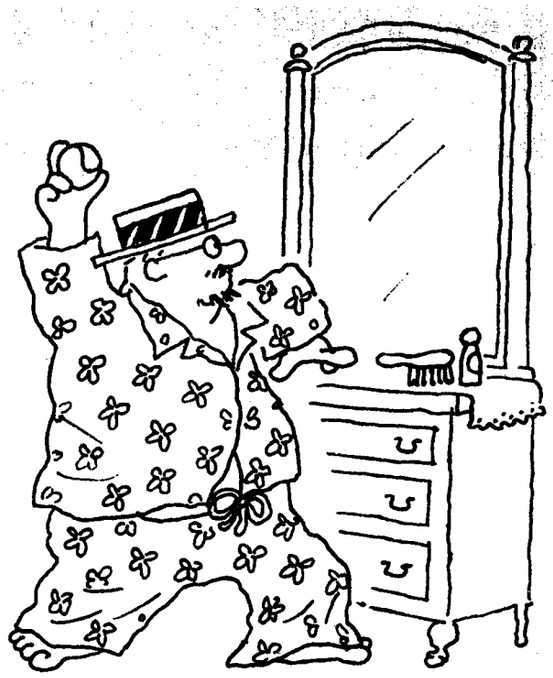
Outfielder Jackie Grimes (CR4) interrupts a conversation about dames to ask if anyone knows how to re-classify a position.



Eddie Warnoski (DD4), who retired to his farm still wears the hat he wore on the day Fisheries won the title.



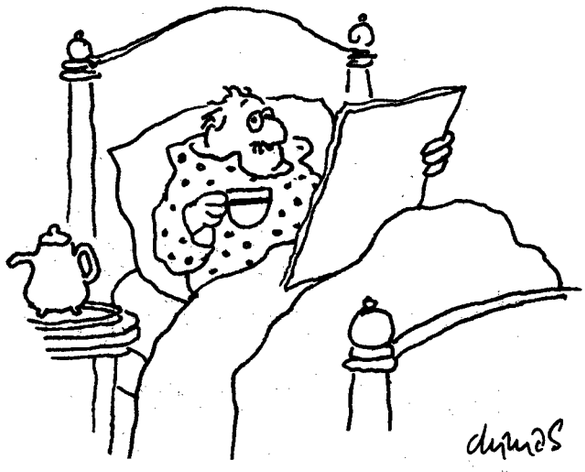
The McGreevey brothers, Eddie (batting average .184) and Nate (batting average .377), on the day Eddie decided to wear his pants longer.



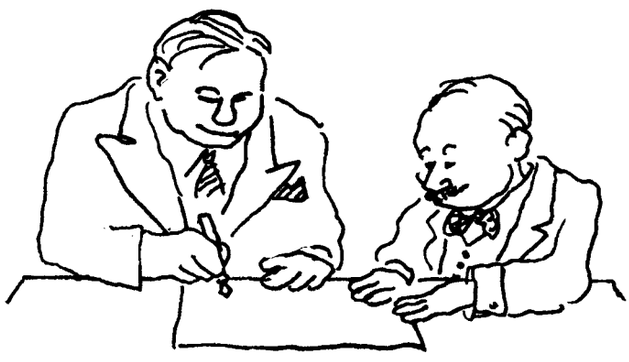
Senator Alex MacDonald and a former Provincial Minister of Fisheries (P.E.I.) having been asked to throw out the first ball at the Championship Final, experiments with his new straw boater on with the expectation that press photographers will be there.

Ossie Strunk (OM4) gives an autograph to "Mac" King who grows up to be Prime Minister Mackenzie King. Ossie does not remember the incident years later when the P.M. mentions it in a speech.

John ("Jack") Leakey (PM5), Chief of Conservation shows up at the game 1) sober and 2) displays a Keen Knowledge of the game surprising people who thought his only hobby was the Rideau Tavern.



Joe Killeen (SX1), Director, Marine Operations at the moment when he reads a an account of the Championship and realizes why most of his staff had big hangovers and called him "Fatso" last Tuesday.



Personnel Officer Alphonse Morin gets Jim "Moose" McGovery to join Marine and Fisheries as Special Assistant on Staff Development. "Moose" hit .417 in the Commercial League last year.

Spurious Emissions

Chuck Walker, senior Yukon biologist has left to join Hydro.

Hugh McNairnay was the successful candidate in the senior F.O., Bella Coola competition.

J.B. (Joe) Allison formerly with D.S.S. has joined us as purchasing clerk, the new "Fred".

Dr. Geen has returned to Simon Fraser University and Dr. Johnson is our Acting Director-General.

George Barber has resigned to go into the consulting business.

Edna Nolting, secretary for Small Craft Harbours, has retired.

Donna Aldous, our consumer consultant, leaves in June.

Bob (G.B.) Armstrong, chairman of DFE Regional Board and Director of EMS, left his post to take charge of the Northern Area for Indian Affairs in Ottawa.

Doug Cunningham retires in June as Emergency Measures Officer.

Seen in Barkley Sound on the bow of the Comox Post -

J.D. McCullock lecturing C. Newton on how to manage the herring fishery for the market place.

Lyn McCaskill has moved from Licencing to Regulations.

The CR5 position in Accounts has been won by Joyce Melnychuk.

Dr. Leo Margolis has been named A/Director of Research and Resource Services.

Dan Goodman, Habitat Protection biologist is going to Ottawa on a secondment, taking over the chores of Les Dominy .

I hear there was a recent seminar on transporting Alaska oil by flat boom down the Pacific Coast. To summarize the deep technical discussions - "although the loss was high; the low capital cost made this proposal look like a sure bet to win out over pipelines and tankers."

Would you believe that Mitch Gay tried to buy a personal commercial fishing licence the day before he retired. However, having no proof of citizenship with him, Licencing couldn't sell him one. He was successful on the second try.

THE Sounder

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

Sounder

July-Sept 1977 Vol.V No.3 Fisheries and Marine Service

John Cairns, Foreign Fisheries Liaison Officer; A. Volkov, U.S.S.R. Representative Canada; V.D. Beryukov, Commander of combined Soviet Pacific fishing fleet.

200-MILE LIMIT

Extension of Canadian Jurisdiction has now been in effect for over six months and so far everything has gone smoothly.

To date we have licensed 22 Japanese longliners, 1 Korean longliner, 9 Japanese trawlers, 7 Soviet trawlers and 6 Polish trawlers. One licence has been cancelled. The Japanese have so far taken 2083 tons (to August 10) of their 3,000 ton blackcod quota and 1,775 tons of their 3,000 ton rockfish quota. We will be watching these quotas very closely to ensure they are not exceeded. The hake fishery by Japanese, Polish and Soviet vessels commences in August-September.

With our present off-shore patrol fleet we have more than adequate capability for surveillance. In addition, 135 destroyer escort days are available from DND; 105 of those being paid for by Fisheries (HQ). With an eight-hour scramble time, any contingency could be

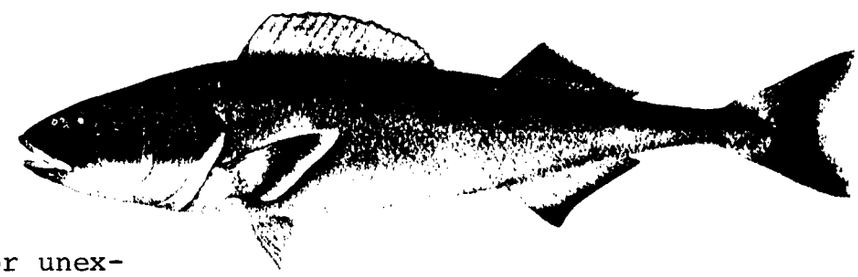
met. The low-flying Tracker aircraft covers the coast twice a week on an average, mostly out to the fifty mile line. Surveillance of the foreign fishing fleet is the primary task of the Tracker. The Argus aircraft, continually on multi-task missions along the B.C. coast, covers the whole 200 mile zone.

As a matter of course, each time a vessel enters the 200 mile zone it is inspected; as it leaves it is inspected again, and if the vessel is in the zone for any period of time it is subjected to another inspection in the interim. Catches are also monitored by having the agents giving a weekly catch and effort report; detailing catch by species and by vessel. A copy of the fishing log is usually collected during zone departure boardings and in addition, the Biological Station presently has four observers on staff who are obtaining biological information on catches of foreign trawlers. These observers spend up to three weeks on any one trawler.

One of the main effects of extended jurisdiction has been that for the first time we have taken over active management of domestic and U.S. groundfish-trawl fisheries. We now have restrictive measures in effect off the west coast of Vancouver Island where none was before. Total allowable catches have been established for the domestic fleet and excesses allotted to foreign nations.

In looking to the future, the objective would be to phase out all foreign fishing with the 200 mile west coast zone. Our present limitation is the market. We have the catching and processing capability for most things; with perhaps some capability for catching blackcod in deeper waters still to be developed. As the market improves and hence processing, we will be in a position to use the Total Allowable Catches. As that happens foreign nations will be phased out.

Blackcod Tagging Study



Blackcod is the major unexploited species on the westcoast since taking over control of the 200-mile. Up to now, this species has been completely unmanaged.

Market potential, world-wide, is phenomenal.

Now, with the responsibility for managing stocks to 200 miles and added resources to do the job, studies are underway.

In recent months, the Groundfish program at the Pacific Biological Station has been tagging 'blackcod' off the west coast of the Queen Charlotte Islands. The purpose of this study is to examine distribution and migratory patterns of blackcod to determine whether blackcod off Canada's coast are resident or whether they are part of a large Pacific Ocean stock. This information is essential for successful management of the fishery in Canada's 200-mile fishery conservation zone. In addition, these tagging experiments should yield valuable information about the age and growth rate of sablefish.

Blackcod or sablefish are widely distributed along the Pacific coast from northern Mexico to the Bering Sea and along the Asian coast from Kamchatka to the northeastern coast of Japan. The largest concentrations appear to be in the Gulf of Alaska between Queen Charlotte Sound and the Shumagin Islands.

Adult blackcod are bottom-dwelling fish which inhabit deep areas of the continental shelf. Generally speaking, they are fished at greater depths than other commercially important groundfish and often are found at depths exceeding 1000 meters. Yet, despite the fact that the blackcod has been fished commercially for more than thirty-five years, relatively little is known about its biology.

In particular, scientists do not know where or when blackcod spawn or where the young fish spend their first year of life. It appears that mature fish spawn in deep water, probably during early spring. The eggs are pelagic, that is, they float freely in the ocean currents and they have been discovered occasionally in plankton hauls at depths of up to 600 meters. Very young blackcod have been observed far out to sea but it is not known whether this occurrence was typical or due to adverse currents that may have swept the young fish away from the coast.

Juvenile blackcod, 30-50 cm (12-20 inches) in length, appear to adopt a bottom-dwelling life in shallow water and they have been observed frequently in large schools along inshore areas. However, it is not known where the bulk of the juvenile stock resides. After about two years in shallow water during which time growth is rapid, these fish begin to mature and move into deeper water along the continental shelf. Some blackcod attain a very large size; the largest reported to date weighed 126 pounds. However, most commercially caught fish average 5 to 10 pounds and appear to be about 5 to 10 years of age.

Blackcod are caught commercially by trap, longline or bottom trawl. The use of traps is a relatively recent and effective fishing method for capturing this species. The traps, measuring 8 X 3 X 3 feet, are set out along a groundline about 500 feet apart. The groundline may be up to 2 miles long and carry twenty traps. These traps tend to be selective for larger fish and very little of the catch is discarded. The minimum size limit is 2½ pounds dressed weight.

The Japanese blackcod fishery off Canada's coast uses primarily longline gear which is set out for periods of about 50 hours. Each 'skate' carries up to 500 hooks, all of which must be baited before the gear is set.

Blackcod are usually incidental to the bottom trawl fishery but because of the size of the trawling fleet, the contribution to the total catch is significant. Moreover, the average size of trawl-caught sablefish tends to be less than the average size of sablefish in trap or longline landings.

Blackcod meat is highly regarded both in Japan as fresh-frozen fish and in North America where it is sold most often as smoked 'Alaska blackcod'. Consequently, high prices are paid, especially for the fresh-frozen product which is dressed, washed and frozen on board the fishing vessel.

Trapping proved to be an ideal means of capturing healthy blackcod for tagging experiments. The blackcod arrived on deck vigorous and undamaged which is rather surprising considering the pressure and temperature changes the fish must endure on the journey to the surface from one half mile below! Once on deck, the blackcod were anaesthetized to facilitate the tagging operation. The tag being used in the present study is a small, yellow plastic tube bearing an identification number and return address. These tags are implanted just below the first dorsal fin by means of a gun which forces the anchoring portion of the tag through a hollow needle and securely into the flesh at the base of the fin rays. Predators were occasionally a nuisance during the tagging operation; sea lions seem especially fond of blackcod and several black-footed albatross and an eagle managed to catch a few tagged fish. However, these losses posed no serious problem and with perseverance just under 5200 tagged blackcod were released off the west coast of Moresby Island. A reward is offered for the return of tagged blackcod with information regarding the date, location and method of capture. Anyone finding one is requested to freeze the specimen and notify Dr. R. Beamish or C. Wood at the Pacific Biological Station (telephone 758-5202 collect).

The Pacific Biological Station is continuing its blackcod tagging cruise off the west coast of Vancouver Island this fall. In addition, plans have been made to carry out exploratory fishing for blackcod in deeper water. In the future, the distribution of young blackcod will be examined and an effort will be made to locate major spawning grounds.

by C. Wood and R. Beamish

The Grapevine

Managements very often despair over the spread of rumours within the organization. They conclude that rumours, ipso facto, must be bad. "Management's biggest complaint is that information carried via the grapevine is always wrong. Statistics say otherwise; in normal...situations 75-90% of the information is correct. The grapevine works best when management tries to cloak its moves in secrecy. Speculation takes over where facts leave off."

Uniroyal Management

Pre-Retirement Preparation Program

Missed the last edition of the Sounder. The slots of Reno beckoned - so having returned with some of the casino's money jingling in my pocket, back to what I learned at the Pre-Retirement Course.

Mr. Pier Clou was our speaker for the session on the Canada Pension Plan. The Canada Pension Plan operates in all provinces except Quebec, which has its own similar scheme. Mr. Clou distributed three pamphlets: Retirement Pension, Disability Benefits, and Survivor's Benefits.

Retirement benefits under C.P.P. are applied for, indeed have to be applied for, no earlier than 3 months before one's 65th birthday. Once eligibility is established, the applicant receives a monthly retirement pension for life. A file is maintained on all contributors in Ottawa using surname and SIN, and the best insurance that the files are accurate is to make sure that both are correct on T4 slips.

In order to have an application processed without delay, age must be proved, preferably by a birth certificate. If this is unavailable, Canada Pension Plan office will provide other alternatives. Current proof (copy of T4 slip) of the previous year's earnings and contributions and social insurance card must also be submitted.

Contributions are calculated on the average annual earnings, contributed at the maximum level since 1975. C.P.P. pensions already being paid are escalated every January based on the cost of living index.

Mr. Clou recommended that you take the pension at age 65, whether or not you actually retire. However, you can continue to pay until age 70 and then pick up the pension, using the higher earnings.

There is a penalty clause after reaching age 70, whereby you cannot back-collect and it is in your best interests to contact the Canada Pension Plan office before your 65th birthday in order to apprise yourself of whatever is best for you.

Disability benefits are also administered under the Canada Pension Plan and are only for those who have severe disabilities, and are determined to be disabled within the meaning of the Canada Pension Plan legislation. In order to claim disability benefits a person must have contributed to the plan for five whole or part calendar years in the period January 1966 to December 1975. Because of the complexity of the disability benefits legislation, disabled contributors or persons responsbile for the contributor's welfare should contact the nearest district or local office of the Canada Pension Plan, to ensure that application is made for disability benefits. Normally the disability pension begins 4 months after the last day the contributor was capable of working. Because of this time lag, U.I.C. sick benfits should be claimed in the interim (up to 15 weeks).

Monthly benefits for the surviving spouse of a contributor and/or orphans must be made by written application, they do not begin automatically when the contributor dies. Payment can only begin after applications are approved, but can be retroactive to the month following that in which the contributor died.

This plan allows for a lump sum benefit or a spouse's pension (in the Canada Pension Act a spouse is defined as a person who was married to a contributor and/or who was residing in a husband/wife relationship (common-law), and there are residency requirements in each case which must be met.

Orphan(s) benefits are also available and applications should be made to the Canada Pension Plan office. In addition persons who are eligible to receive a surviving spouse's pension may also be eligible to a retirement or disability pension in their own right. In such cases, surviving spouses receive a combined pension up to a ceiling prescribed by the legislation.

The Old Age Pension is paid out over and above the Canada Pension Plan, and must be applied for separately; 6 months before reaching the age of 65.

Mr. A.G.S. Broughton, a personification of happy-retirement and past officer from Revenue Canada-Taxation, spoke to the group on income tax. He made available four interpretation bulletins published under the authority of the Deputy Minister of National Revenue for Taxation: Principal Residence, Registered Retirement Savings Plans (RRSP), RRSP for Taxpayer's Spouse, and Income Averaging Annuity Contracts.

One of the subjects he covered was how to get the most of your Severance Pay. He suggested that before retiring, employees should investigate throughly different tax deferment and tax averaging mechanisms.

At the time of attendance at this course, the RRSP for spouses, and Registered Home Owner's Savings Plan were

discussed as means of avoidance (as opposed to evation) of income tax. However, it is expected that these plans will be tightened up before December 1977 so a check with the Income Tax Department is most advisable.

Increased deductions are also now allowed for those over age 65, and in some cases these can be transferred to spouses. Once again, advice should be sought from the Income Tax Department.

The subject of physical and mental health was covered by Dr. A.H.M. Stevens, National Health and Welfare. He touched on the culture shock of retiring, of losing the "status" of working, of being under one's spouse's feet all the time. He recommended that no one make immediate moves, they should first have a trial period of living in places that might interest them. He said be prepared to accept some natural declines in physical health but look after yourself by weight control, exercise and good eating habits.

In the third and last writing, I will cover "Coping with Stress and Change" and "Superannuation".

Pat Phillips

Geoduck Clam Survey Announced

Honourable Sam Bawlf, Minister of Recreation and Conservation has announced the award of a $36,000 contract to locate commercial quantities of geoduck clams (pronounced "Gooeyduck") along the coast of British Columbia. Mr. Bawlf also announced that the British Columbia Oyster Growers Co-operative has received an order from Japan for 110,000 pounds of geoduck siphons.

Ministry of Recreation & Conservation photo

The contract awarded to Coastal Biochores Ltd. will cover selected areas from Juan de Fuca Strait, Strait of Georgia to Queen Charlotte Strait, complementing surveys and biological studies of the clam already conducted by the Marine Resources Branch in southern coastal areas.

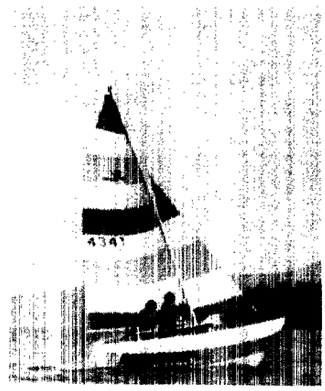
Mr. Bawlf said he was pleased with the recent developments and particularly with the order from Japan. "Washington State has developed a $5 to $7 million geoduck industry in recent years," he said. "I am confident that development of this clam fishery will add as much as $3,000,000 annually to the British Columbia economy within five years."

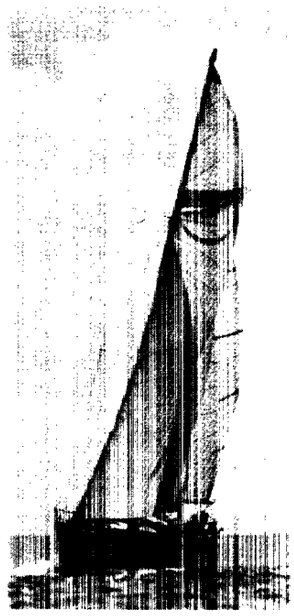
World demand for the geoduck is unusually high and prices are very attractive. Average weight of the clam, which is found in 30-60 feet of water, is 2½ pounds, with some reaching 8 pounds.

Limited commercial harvesting is now taking place in British Columbia but the development of this new fishery has been restricted, among other things because of lack of familiarity with the location of the clam beds and with harvesting methods.

A large majority of all clams presently harvested are handled or processed through the B.C. Oyster Industry, which is under the jurisdiction of the Marine Resources Branch of Mr. Bawlf's Ministry. "We are co-operating with federal authorities in the development of new management plans for geoducks," said Mr. Bawlf. "They are responsible for the resource, while we regulate the processing."

QUIZ!





Boating Safety

If you operate a small vessel on any of Canada's waterways or coastlines, you should know the answers to all of these questions, which have been based on Transport Canada's 1977 Boating Safety Guide.

1 If you came across a floating flare giving off orange smoke, what would it indicate to you?

a) Fireworks about to start
b) This is a distress signal
c) A diver is down
d) No special marine significance

2 Should it ever be necessary to swim whilst wearing a lifejacket, which stroke is generally recommended?

a) Back stroke
b) Side stroke
c) Breast stroke
c) Crawl

3 After use or if it becomes wet, how should you handle a lifejacket?

a) Have it dry cleaned
b) Wash in detergent or cleaning fluid, and hang to dry
c) Hang to dry in open air or ventilated area
d) Tie it over a radiator or heat vent

4 Cruising in the Pacific coastal area boaters may be aware of a continuous transcribed broadcast of marine weather and dangers to navigation information. This is received on what station or frequency?

a) 21B VHF
b) C.K.W.X.
c) 139.50 MHz
d) 98.7 on your dial

5 When fishing from a small boat, the fisherman should stand up:

a) Only when a fish is actually on the hook
b) Just for a stretch, when not actually fishing
c) Only to change positions with another occupant of the boat
d) Never

6 Check these true or false facts about cold water survival:

a) Swimming helps to keep you warm.
True ☐ False ☐

b) In water of 10°C, average predicted survival time is about 2½ to 3 hours.
True ☐ False ☐

c) Women generally cool faster than men
True ☐ False ☐

d) If there are 2 or more people in the water, huddling together helps to conserve heat.
True ☐ False ☐

e) If someone is rescued suffering from hypothermia, first thing to do is give the person a good stiff alcoholic drink.
True ☐ False ☐

7 A 12-foot boat would be overpowered if driven by an engine of:

a) Over 25 h.p.
b) Over the limit stated on a plate in the boat
c) A 12 ft. boat can never be overpowered
d) Over 100 h.p.

8 If a gasoline powered boat has been safely fuelled, and the tank cap affixed, all without an explosion, the boat is safe.
True ☐ False ☐

9 If a vessel heading straight for you gives one blast on a whistle, what is it telling you?

a) To get out of his way
b) He is changing course to port
c) It is just a friendly greeting
d) He is changing course to starboard

10 The "one lifejacket in the boat (or floatation device) per person" rule applies to canoes:

a) Yes, but it's better for them to be worn
b) Yes, but only on a large lake or swift flowing river
c) Only in coastal areas
d) Does not apply to canoes

ANSWERS

1 b is correct. A floating orange smoke flare is one of several distress signals.

2 Either a or b is recommended.

3 c will ensure a longer life.

4 a is correct. Telephone 273-2373 for a recorded message of marine weather conditions.

5 d is the only acceptable answer.

6 a) False
b) True
c) True
d) True
e) False

7 b is correct.

8 False. Explosions frequently occur when an engine is started, and there are special precautions which must first be followed. If you were wrong on this one, you'd better read up on it, quick!

9 d. Know your whistle signals.

10 a is the right answer. Wearing is recommended because a canoe can be quickly blown away from its occupant(s).

The "Boating Guide 1977" is published by Transport Canada and will be widely available where boaters gather, or from Transport Canada.

BILL C-38

Bill C-38 has some strong proponents and some loud opponents.

One of the big things is that our Fishery Officers are now given the powers of peace officers under the criminal code, performing duties pursuant to the Fisheries Act. Under this amendment, Section 5(1), Fishery Officers will be authorized to serve summonses and warrants.

Definitions of "fish" and fishing" have been changed under the Act. The definition of fish is now extended to include "shellfish, crustaceans, marine animals,and the eggs, spawn, spat and juvenile stages of fish, shellfish, crustaceans and marine animals." Section 30 has been modified to reflect this change. In addition, the reference to spawning grounds has been removed. This change is needed to protect fry which may have moved several miles from their spawning grounds. The definition of fishing is amended to include the "attempted catching of fish". A Quebec case was when a judge ruled that "attempting to catch fish" was not fishing as defined in the Act if no fish had been caught. Such a ruling if pursued to a logical conclusion would mean that a person could not be convicted for carrying out the activity of fishing during a closed season or in a closed area until the fish had actually been taken. Control of illegal fishing would be lost or seriously impaired. The provision in Section 12 that salmon must weigh three pounds to be fished commercially will be deleted. In some years, especially on this coast, salmon of less than three pounds have reached adult stage and form a significant portion of the commercial catch.

Section 58(5) is changed to allow for forfeiture by the Minister, as an undelegated authority. Whereas before only a convicting court or judge could order seizure, now, "Where a person is convicted of an offence under the Fisheries Act or the regulations, the Minister or the convicting court or judge may, in addition to any punishment imposed, order that

(a) any vessel, vehicle, article, goods or fish seized....

or

(b) the whole or any part of the proceeds of a sale....

Because of the high returns from illegal fishing, poachers are not only more sophisticated in methods but have often not been deterred by provisions of the Act. The Minister, in the case of a licensed fisherman who is apprehended poaching, could suspend or cancel the fisherman's license. In the case of a poacher who was not also a licensed fisherman no comparable deterrent existed. The amendment to Section 58(5) provides for seizure of equipment used or intended for use in poaching upon the laying of a charge and upon conviction, and subject to the Minister's discretion, to forfeiture.

Provision for a ticketing procedure is included in the Act. Section 61(1) clarifies the application of this section and increases penalty on summary conviction from a maximum of $1000 to a maximum of $5000. Sections 61(2) to (3) provides for a ticketing prodedure and voluntary payment of fines for minor offences designated in the regulations.

Section 31 of the Fisheries Act is rewritten to broaden the definition of fish habitat. For the purposes of Sections 31, 33, 33.1 and 33.2, "fish habitat" means spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life process.

Fish habitat is the original source of every fisherman's prosperity. Fish habitat is fundamental to fish life itself. These feeding and rearing areas of valuable species like salmon and herring are priceless assets, but they are endangered and to many people in our urbanized society, saltmarshes, mudflats and estuaries of our rivers and streams don't look like or smell like places of value. Yet to those who know what they are looking at, they are the irreplaceable nurseries of fisheries wellbeing. The shallow waters in which fish grow receive the nutrients (on which the fish feed) in a steady, nourishing trickle from the saltmarshes. Without this input the waters become not nurseries but watery deserts - devoid of fish life. Protecting the fish starts ashore.

Subsection 33(2) is the basic prohibition against depositing a deleterious substance and is the core of the pollution provisions of the Fisheries Act. While this basic provision is not amended, the amendments to Sections 33 to 33.4 relate to achieving the object of subsection 33(2). The maximum penalty for violating this subsection is increased from $5,000 to $50,000 for a first offence and to $100,000 for subsequent offences.

Subsection 33(7) has been expanded to empower courts to order positive action to prevent further deposits of deleterious substances. The old section only provided for court orders to refrain or to cease committing further offences.

Following subsections allow for greater preventative action, cleanup action without criminal responsibility, expanded definitions, new authority to make regulations, and increased penalties.

LICENSING STUDY

Dr. Sol Sinclair has been engaged to study the fisheries licence system.

Under the terms of reference of the contract, which goes through to September 1, 1978, Dr. Sinclair will "Review and evaluate the entire commercial fishing licencing system in the coastal waters of British Columbia" and "provide recommendations concerning the role and type of future licencing and fee system tending towards attaining optimum sustainable economic yield...".

During August and September he will meet with organizations involved in the industry (e.g. U.F.A.W.U., Fisheries Association, P.R. Co-Op, Native Brotherhood, Vessel Owners etc.) and also visit various points along the coast on a familiarization trip.

In true professorial style, Dr. Sinclair admits "Anything over 10 pages I don't read." He is comfortable with oral submissions and will accept written statements from anyone wishing to present points of view. But he says if Fisheries field staff or individual fishermen wish to put their impressions on paper "on 5-6 pages, I'd be glad to read it".

In carrying out the terms of the contract, Dr. Sinclair is charged with giving consideration to the following:

1 The fisheries resource base, present and potential, as described by existing knowledge and as it relates to existing harvesting capacity;

2 Distortions which have evolved (capitalization of economic rent, excessive investments, dissipation of economic rent, conversion of licenced fishing effort by vessel type) as a result of licence policy with particular reference to the salmon purse seine element of the fleet;

3 The distortions that have arisen in licencing relating to the management of the herring roe fishery including problems of allocating permits in the herring roe on kelp fishery;

4 The ownership of fishing licences and vessels by Corporations vs individual fishermen;

5 The inter-relationship of licencing of the commercial and recreational fisheries;

6 The on-going studies on methods of cost recovery in relation to the Salmonid Enhancement Program and Extension of Jurisdiction;

7 The administrative requirements, structures and costs of alternate options for managing, licencing and fee structures.

Vancouver Sun photo

A preliminary statement will be made to the ADM Fisheries Management, D.J. McEachran, at the end of the initial round of discussions. A final report will be submitted by September 1, 1978. Recommendations made by Dr. Sinclair and those ultimately implemented by FMS will not take effect before that final date. The only possible change in the interim will be a lifting of the moratorium on all transfers of tonnage for purse-seine salmon vessels.

Dr. Sinclair's recommendations presumably will be compatible with any cost recovery mechanism for S.E.P. involving licencing. Licencing may be the major technique for S.E.P. cost recovery, at least initially and conceivably it would be geared to allow for increased fees as catches increased.

For those who query how a professor in Agricultural Economics comes to be an expert in fisheries economics, Dr. Sinclair says "Basic economics applies to agriculture and fisheries. The applied aspects are substantially similar; both deal with elements dependent on the natural environment for production. The essential difference is in the nature of ownership; fisheries is a common property resource."

Dr. Sinclair has been a member of the Fisheries Research Board for two 5-year terms and a member of the Canadian Fisheries Advisory Council. He has also conducted a thorough study on salmon and halibut licencing for Pacific Region and has been Chairman of the Advisory Committee to the Freshwater Fish Marketing Corporation for the past eight years. In addition, he has done economic studies of fisheries on Canada's east coast, the North West Territories and Lake Winnipeg, and on Peruvian anchovies and Kenya's inland fisheries.

Japanese-Style Hatcheries

The Japanese have been very successful with their chum salmon hatcheries. By raising the eggs of 90% of their chum salmon escapement in hatcheries they increased production from averages of 2 to 6 million (escapement and high seas and coastal catch) between 1952 and 1970 to 8.5 million in 1971-1973, 9.5 million in 1974, and 17 million in 1975. The returns in 1975 are equivalent to the entire Japanese high seas salmon catch of 45,000 metric tons. These results are impressive and warrant close attention.

Hatchery Technique

The key to the success of Japanese chum hatcheries is acceleration of incubation and subsequent feeding of the fry before release. Acceleration of incubation of eggs and development of alevins is accomplished on Hokkaido by using groundwater, which has a constant temperature of 8-9°C throughout the winter. Furthermore, groundwater is low in silt content and does not contain pathogens, which greatly simplifies the hatchery operation. In some cases artificially heated water is used in areas without groundwater sources.

The higher temperatures during incubation result in fry emergence 6 to 8 weeks earlier than in natural systems. The fry are kept in holding ponds during their incubation period and fed artificially. According to the Japanese, it is important to release the hatchery fry at the same time the natural ones commence their migration to salt water. The preferred weight of hatchery-reared fry is 2 g per fish. However, if the natural migration starts before this goal is reached, proper timing of release is considered more important than size.

After entering salt water, chum fry usually roam around in nearshore areas for several months. The timing of the natural migration generally coincides with beginning of the spring plankton bloom and favorable water temperatures in coastal areas. To check these assumptions a plankton watch and a temperature monitoring program in the saltwater receiving areas is maintained during the spring months. The Japanese also closely observe the occurrence of predators, especially those that are migratory, and try not to coincide fry release with high predator density.

The difference in size between hatchery fry (±2 g) and natural fry (±3 g) when entering salt water is assumed to account for the increased rate in fry-to-adult survival from 0.5 to 1% for natural fry to 4 to 5% for accelerated fry.

The Japanese hatchery technique has mainly been used for chum salmon. On Sakhalin in the U.S.S.R. attempts are being made to adapt the technique for pinks. The main problem with pink salmon is that acceleration of incubation, by using water of higher temperatures than ambient, often results in decreased egg-to-fry survival rates. Also, pink salmon fry need to be in salt water soon after emergence or feeding will stop, resulting in pin-headedness and high mortality rates.

In summary, the main features of the Japanese hatchery technique are:

(1) Acceleration of incubation by using groundwater, or sometimes artificially heated water, with temperatures of 8-9°C through the winter.

(2) Feeding of fry from 6-8 weeks before release to a preferable weight of 2g.

(3) Synchronization of release of hatchery reared fry with migration timing of wild ones.

(4) Monitoring of food availability for fry in the sea by plankton watches.

(5) Monitoring of temperatures in nearshore areas.

(6) Avoiding release of fry when predator densities are high.

B.C. Conditions

The main problem in B.C. in applying the Japanese hatchery technique is to find reliable high quality water sources of about 8-9°C. In addition, freezing temperatures down to -30°C in winter can create problems in maintaining the water temperature at the preferred level.

Water warmer than ambient is available from a number of sources:

1. groundwater
2. natural hot-water springs
3. industrial waste water
4. fossil fuel heated water

Availability, applicability, quality, and economics of each of these water sources need to be determined and tested on a pilot-scale basis. Also, some of the novel incubation techniques used by the Japanese have to be tried out with Canadian chum and pink salmon stocks under B.C. conditions before full production units are attempted.

C. Groot

HALIBUT MIGRATE

from Soviet to Alaska

On May 19, 1977, the Seattle halibut schooner M/V POLARIS, Captain Jacob Bassi, was fishing south of the Alaska Peninsula near the Shumagin Islands and caught a 58-inch (71 pounds) halibut that had a tag attached to its cheek. When the fish was landed in Kodiak, Alaska, the POLARIS crew showed the specimen to an employee of the International Pacific Halibut Commission (IPHC). The Commission's tagging records indicated that the fish was tagged and released on July 5, 1975, about 40 miles off the coast of Kamchatka in the U.S.S.R. (61° 18'N; 175° 21'E) during a cooperative tagging experiment conducted by Soviet and Commission scientists. William Hardman of the Halibut Commission staff and Art Hansen, a fishing captain from Delta, B.C., were aboard the Soviet research vessel RAKITNIY to supervise the tagging and longline fishing. The purpose of the study was to determine the extent of intermingling between halibut of eastern and western Bering Sea.

The halibut was 14 years old when tagged. During the 2 years between release and recovery, the fish grew 5 inches and gained 16 pounds. Assuming that the fish migrated along the 100 fathom line, it travelled about 1,000 miles. A few other tagged halibut have migrated between Soviet and Alaska waters, but none from as far west in the Bering Sea. In 1967, a fish tagged 50 miles southwest of Cape Navarin, USSR was recovered 2 years later off Cape St.Elias in the Gulf of Alaska. Another fish tagged near Unimak Pass, Alaska in 1959 was recovered by a Japanese trawler near Cape Navarin in 1961. The longest migration of a tagged halibut was from the Aleutian Islands to northern California, a distance of 2,300 miles; the fish was tagged in 1930 and recovered in 1936.

These examples of migration between Soviet and North American waters are significant because only a fraction of the halibut population are tagged and relatively few are recovered. The migrations of halibut have important implications for management and this unusual recovery demonstrates the need for continued cooperation of fishermen in returning all halibut tags and recovery information to the Commission.

"Yup, just as I thought . . . it's under the limit!"

Letters to the Editor

Dear Kate:

I saw Fishery Officer, H. McNairnay's comment, poem and drawing of fishery guardian in your May-June issue of Sounder.

I felt very insulted. I was called lazy, drunk and expensive. Well as far as work goes I've never seen too much blood sweat and tears on the patrol boats, or much thrift with government money. If I had the money that goes into that grub bill every week aboard one of your vessels I would have enough gas for a full 2 seasons. If I do any drinking it is not on the job, I wait till I get to town which is lucky if its once a month. I can't keep banker's hours like officer's keep. You people think its a fate worse than death if you don't get to town every weekend.

I believe in my job as guardian. I am paid to protect a river from poachers and inform on salmon runs. I do my job with the best of my ability. I get along well with the FO's in this area and couldn't ask for better people to work with.

P.S. I must admit that I could not help but chuckle when I first saw the drawing and poem, but did not appreciate the generalization.

Greg Riggins,
Fisheries Guardian
Kwinamass River

Date unknown, I am retired.

My Dear Miss Glover:

First, I must tell you that my heart belongs to Maxine. Maxine Hogan. What a terrible shock to me when she changed her name by marriage to something else than Hogan. I tried to commit suicide by drowning, but fell into the tag-lines of a troller. They thought I was a Smiley (for those who have forgotten, a smiley was a large spring salmon). So up I came. Next by shooting. Tough. I was short on my Revenue (as usual) and, having to pay back $50.00 I couldn't afford ammunition.

So, you see, I'm still here, or there, as the case may be. My heart is stomped on and broken like a rotten water melon. Unless, of course you are not having a date tonight, in which case we can make up for the lost hours with Maxine. Just tell your boy-friend this is in the LINE OF DUTY. I am sure he will understand and wait for me with a .45 magnum.

Ah, the days of past Glory! My rakish cap and polka-dot scarf. Forgive me, darling Miss Glover, I have to finish. My back is killing me and the pain of sciatica in my legs and hips clearly calls for a double of something.

Knowing that the wife has a crock of 'Golden Wedding' hid somewhere, I must leave you to commence the hunt. Buenas Dias. Dormez bien. Hasta la Vista. Besame mucho. Rye, here I come, ready or not!

Cheers and so on,

P.S.: Am now searching the garden for fresher turned turf.
God' The THIRST'''

Nick Seymour

THE Sounder

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

Spurious Emissions

Dan Goodman, Regional H.P. Biologist, has been appointed ADM, D.J. McEachran's Executive Assistant, effective September.

Perry Savoie has left his F.O. job in Duncan, left the Service, and returned to the Yukon.

Larry Duke has won the competition for District Supervisor, Victoria.

Steve Enos, finance Officer, has left Fisheries to accept a promotion with another department.

Willie McKenzie, the new Assistant Supervisor at Prince Rupert, has a new wee one, a boy, 7 lbs. 5 oz.

Have you ever seen anything worse than the new travel forms? - Don't fit most typewriters, insufficient space, complicated and wholly regressive.

Colin Harrison has won a prize in the B.C. Salmon Derby with a 22-15 pound fish.

Roly Inglis retires September 1 from his position as manager, Fisheries Equipment Depot.

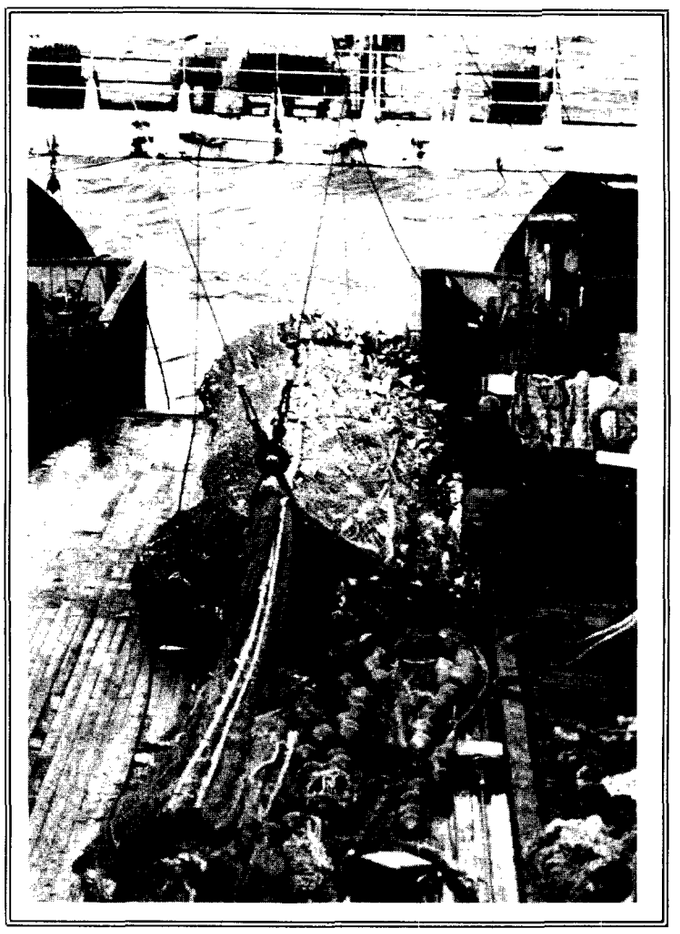
Steve Zablosky, Fraser River Technician and blasting expert, retires in mid September.

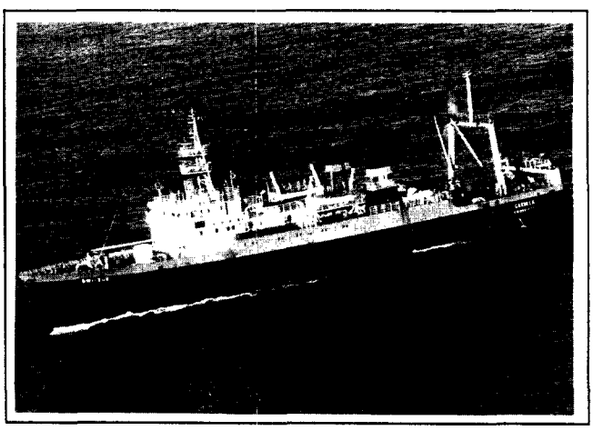
J. Hipp leaves his Terrace position to take over the upper Nass sub-district at Nass Camp, and Trevor Field is moving to Terrace.

Dorothy Jameson is the new pay clerk at Personnel Branch.

Sounder

Nov-Dec 1977 Vol.V No.4 Fisheries and Marine Service





Twenty Ton of dogfish being unloaded on the Polish Vessel GARNELLA.

The Polish Dogfish Operation

The Polish dogfish operation during October and November of this year was a first - the first time foreign (non U.S.) fishing vessels have been allowed to fish inside our 12-mile limit.

When Canada first identified in 1976 surpluses available to foreign fleets within the new 200-mile limit, Poland pursued the matter and was told that, in addition, 20,000 tons of dogfish were available. It was only available because of our domestic industry's lack of technology in catching and processing the species and because of lack of markets.

The fishing industry in B.C. was consulted regarding their attitudes on allowing a Polish dogfish operation. The general concensus was that they wanted rid of the dogfish so the Polish fleet was welcome to them. It had been estimated that after July 1st large bodies of dogfish were available off Barkley Sound - until about Sept. 15th, and as late as October 15th in Hecate Strait.

Polish Dogfish cont'd.

The Poles did a lot of preparatory work in developing processing techniques for dogfish and on October 5 - after 3 months delay - assigned 2 hake vessels to commence dogfish operations. One of these vessels was equipped with a U.S. built pigskinning machine which was utilized quite effectively for skinning the fish - at the rate of 5 per minute. The other vessel had no advanced equipment.

The initial program was designed to use midwater trawls to avoid by-catches of bottom fish. However, almost a reverse situation resulted - minimal catches of dogfish and fairly high catches of rockfish and other species.

The operation was then switched to bottom trawl which virtually eliminated the salmon incidental catch but which still produced a high bottom fish by-catch. Groundfish catches became almost non-existent when large bobbins were attached to the groundlines.

The fishery off Barkley Sound, starting October 6, resulted in only spasmodic catches of dogfish and operations ceased after 10 days. The TUCANA took 12.3 tons in 4 days and the GARNELLA took 40.9 tons in 9 days. (The Poles had been notified beforehand that the chances of finding large bodies of dogfish at this date off Barkley Sound were slim.)

The operation moved to Hecate Straits where the catches were good at times but largely dependent on the local knowledge of the captain/advisor and the degree to which the Polish captain was willing to listen. At the new location, the TUCANA took 123 tons in 17 days; the GARNELLA, 197.9 tons in 14 days; and the WLOCZNIK (a replacement vessel), 28.1 tons in 7 days.

All the while the Polish dogfish operation was underway, there was an enforcement officer on board each vessel. There was a Canadian captain/advisor on board as well, whose job was to advise the Polish skipper and help him find the dogfish. Laurie Gordon, Bob Wowchuk, Lloyd Phillips, Byril Kurtz and Jack Broome shared the enforcement duties with amazing ferrying and transferring help from Capt. Casey and the Kitimat II.

One of the results of the operation was that the large bodies of dogfish in Hecate Straits, especially in the White Rock area, reported by our own fishermen were not confirmed.

The actual operation was a difficult one - with up to 5-6 hours being spent between trawls getting the fish out of the nets, virtually done manually - and apparantly an unpopular one. The Polish crews view it as unprofitable since they work for wages and a bonus based on tonnage.

The Pacific Co

The U.S. hake fishery on the Pacific Coast is at present still in an experimental stage. Several vessels like the Linda Jeanne a 65 foot trawler from Eureka, are looking at the possibilities of making hake a profitable commercial catch. With the aid of technically advanced equipment (electronic gear, radar and refrigerated holds) the possibility exists that hake may become a valuable food fish and attempts are being made to develop this potential. Hake has remained an underdeveloped fishery on the Pacific Coast because past methods were either impractical or not economically feasible as a means of preventing hake from losing its fresh taste and texture soon after being caught. But with better freezing methods available, attention is being directed specifically toward fresh, frozen, and processed products.

DRAWBACKS IN HAKE FISHERY

Hake has a reputation for its poor keeping quality.

1. Odor - the raw flesh has a neutral odor but develops a strong persistent odor on the skin in less than one day if un-iced.
2. Flavour - very fresh hake has a bland flavour, but this characteristic also permits modification in flavour with the addition of 'additives' (Use in types of precooked breaded fillets).
3. Texture - an unfavourable mushy texture, if not really fresh. This is caused by Myxosporidian parasite which infects the flesh, causing liquefaction and mushiness.

Hake must be processed without delay as storage life is limited. After three days on ice, hake tends to rapidly deteriorate in quality. Experimentation with iced fillet stored at 32^{o} - 36^{o}F have preserved hake in its fresh state up to two weeks. Tests show that blocks of packaged frozen hake stored at lower temperatures are the best means of maintaining a first quality product. Antioxidants and packaging films with low oxygen transmission may also preserve hake for a longer period of time. The industry must overcome these problems of processing and handling in order to consider hake as a food fish.

The economic return of a hake fishery must also be considered. Presently the low price paid to fishermen, problems of preservation and a limited market tend to discourage fishermen from entering the fishery. As a result, hake is used only for industrial products (fish meal and oil) and remains an under-utilized species by both U.S. and Canadian fishermen.

ast Hake Fishery

Foreign fisheries of Russia, Japan and Europe have overcome problems of flavour and texture by extremely rapid processing or freezing of hake at sea. The Japanese are now experimenting with the possibility of using hake as a "surimi" (in the form of minced, washed and frozen flesh). It is used as a raw material for processing into food products (Kamaboko or fish sausage in Japan). In the U.S. the possibility of adapting this modified raw material into a desirable product is being considered. The use of hake as food offers the greatest potential for economic return, but adequate returns of labour and capital are prerequisites for the establishment of a viable hake fishery on the Pacific Coast.

EUROPEAN HAKE FISHERY

The Atlantic hake fishery has kept pace with modern technology. Trawlers have been modified to include refrigerated vessels capable of refrigerating and salting fish. The cape hake of the African Coastal waters also carries a protozoan parasite that destroys muscle tissue, yet despite its poor keeping quality, it is the most valuable commercial species landed in the Union of South Africa. The fish are headed, gutted, and iced for fresh fish markets - heads and offal are reduced to white fish meal and vitamin A extracted from the livers. The best are filleted and smoked; quantities are salted, dried and canned, and smoked fillets and frozen blocks of hake are exported to European markets.

SOVIET AND JAPANESE HAKE FISHERY

Unlike the American industry which depends upon an offshore fishery, the Japanese and Soviet effort is not hampered by the problem of distance. They are equipped with large freezer trawlers with or without factory facilities that allow them a greater range than in the offshore fishery.

On the Pacific Coast hake is considered a surplus industry by U.S. standards, and Soviet and Japanese trawlers have been allowed to take limited catches within the U.S. 200-mile limit. At present this is approximately 150 thousand tons of hake taken annually off the Pacific Coast, a harvest our industry could utilize.

THE FUTURE

To find hake in abundance and to process the harvest effectively are the major considerations. Although past methods were impractical in maintaining a desirable product, today's technology (i.e. freezer boats) may be the answer to the problem of processing and handling. If a market for human consumption is developed on the Pacific Coast the economic return to the fishermen and industry would be large. Since foreign trawlers have shown an interest in the Pacific hake industry, it would seem logical that further experimentation, and interest, should be invested in our own industry. If trawlers like the "Linda Jeanne" are successful on an experimental basis, our hake fishery could become a primary industry on the Pacific Coast.

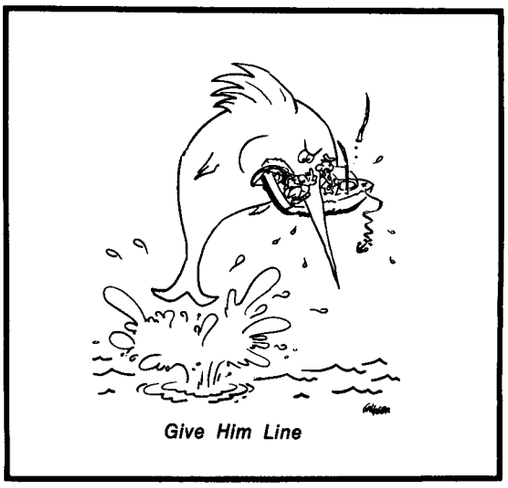
S. Haughian
Economics & Special
Industry Service

JAPANESE IMPORTS OF SALMON AND ROE RISE SHARPLY IN 1977

Japan's import of frozen salmon and salmon roe has risen sharply this year. The import of frozen salmon, with red salmon accounting for 60 to 70%, has reached 10,120 metric tons to the end of August, easily outstripping the 3,700 tons imported last year, and promising to reach a 12,000 ton level for the year. This total is second only to the record year of 1973 in which 15,150 tons was imported.

The leading suppliers were the United States and Canada which have sold 7,597 and 1,958 tons respectively, followed by North Korea (484 tons), Mainland China (38 tons), Taiwan (31 tons),South Korea (12 tons), and Norway (1 ton). Supply from the Soviet Union has been nil, as the Japanese trading firms, mindful of national resentment over the severe ban on salmon fishing in the Soviet 200-mile zone, have been shy to deal with her.

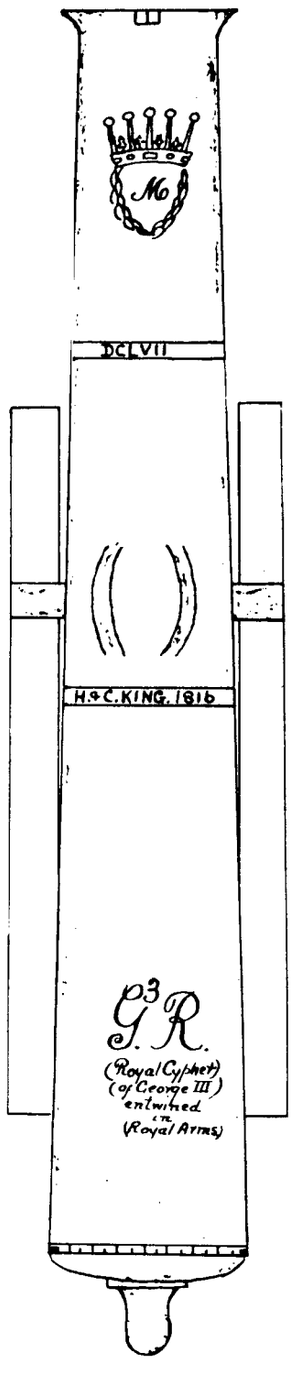
This year's import of salmon roe, mostly purchased in Alaska, is considered certain to reach a 6,000 ton level, a new record which would surpass the historical high of 5,773 tons set in 1976. ("Suisan Keizai Shinbun", September 27, 1977.)



Give Him Line

A BLAST FROM THE PAST!

Calibre:- 5½ inches, rifled
Length: 6' 6" overall.
Range: Approx 1000 yards
Charge:- 3 lbs = 2½ lbs fine grain, ½ lb blasting. Black powder in 2 lb bag.
Loading:- muzzle.
How fired:- By Brockton Pt Lighthouse Keeper pushing electrical button in lighthouse
When fired:- Nine p.m. Time taken from lighthouse chronometer checked daily at 11 a.m. on signal from Meteorological Office, Toronto through Meteorological Office, Vancouver.
Distance heard:- It is said that, under favorable conditions, has been heard at Mission B.C. 42 miles.
Chronometer:- Has error of ten seconds per annum.
Miss fires:- Once only in three years preceding November 1938. Several times in previous periods
Silent:- During reconstruction of housing in April 1936
Housing:- Wooden shed open front and back. Wood floor. No stone or concrete anywhere.
Rifling:- Badly worn, in 1938, after over 15,000 yds.
Metal:- Brass. (gun metal)
Condition:- Excellently clean and well oiled
Carriage:- Fixed, solid, wood, painted red.
Lighthouse Keeper:- Alexander McLeod, who succeeded T H Walsh.



The gun fired from Brockton Point every night is a relic from old fishing days.

It was presented to Vancouver in 1894 by the Earl of Mulgrave and used to signal the 6 p.m. curfew for fishermen. This signal of cessation of fishing lasted only as long as did a very localized fishery. At the turn of the century, innovations in boats and gear changed the nature of the fishery. Gasoline engines built in Vancouver soon powered the gillnet fleet, purse seines became legal in the salmon and herring fisheries, and dragging with the otter trawl increased the yield of groundfish.

Now, the gun has another use - to set clocks and watches by. Apart from the daily 9 p.m. firing, the gun also goes off on November 11th at 11 a.m. and December 31st at 12 midnight.

Over the years the gun has been silenced numerous times. During the two World Wars quiet prevailed for fear that jumpy citizens would think Vancouver was under attack. Then there was the time the federal government claimed it couldn't afford the cost of the gun powder. Repairs, cleaning and malfunctions account for the other missed firings.

To prevent pranksters from tampering with the gun, it is now housed in a cage. Before this, a hole was blown through the "O" in the Texaco sign on the marine service station. In 1969, during Engineers week at UBC, the gun was kidnapped and later "found" after ransom was paid.

Now that great blasts from patrol boats and radio communications signal openings and closures, the original purpose of the gun is gone, but it still serves Vancouver in historic and time-keeping value.

New Reports
Fisheries Management Pacific

Biology of the Nass River Eulachon (Thaleichthys pacificus)

By: O. Langer, B.Shephard & P.Vroom
Technical Report No. PAC/T-77-10

Prelimany revision of Georgia Strait and Juan de Fuca Strait tidal salmon sport catch statistics - 1972-1976, based on Georgia Strait Head Recovery Program data.

By: A.W.Argue & J.Coursley
Technical Report No. PAC/T-77-16

A Preliminay study on the occurence of coal dust in Roberts Bank sediments and the effect of coal on selected fauna.

By: B.C.Pearce & J.McBride
Technical Report No. PAC/T-77-17

Peter Ryan has donated a number of technical training manuals to the library and they are available to anyone interested.

Corrosion Control	First Aid
Radiotelephone procedure	Safety
Electromagnetism	Magnetism
Automotive Repairs	Tools
Electrical Wiring	D.C. Meters
Radio Theory	

A Backyard Spawning Stream

About sixteen years ago Mr. Warren Woodhurst retired from his career and moved onto one acre of land in a very attractive area in Surrey. About 380 feet of a tributary of the Serpentine River traversed the acre. At that time it was overgrown by thickets, cluttered with old logs and stumps, and for the most part it was heavily silted.

Working gradually over the early years, Mr. Woodhurst cleared the banks of the stream, then the stream itself. It was still heavily silted, and deficient in gravel. He bought and installed gravel, placed several low weirs of 8 to 10 inch high building blocks, raked out the silt, and dug two artesian wells to increase summer stream flows. Some of the small number of Coho which previously bypassed the area, now stopped and spawned there, and their number gradually increased over the years.

This year Mr. Woodhurst undertook a small Salmonid Enhancement Program Public Involvement project to further enhance the stream. Spending less than $90.00 of Public Involvement money, he improved the weirs, got rid of more silt and added more gravel. At this time of writing, October 26, he is now awaiting arrival of the first Coho. The streambed downstream of the gravelled area has wisely been left as a fry rearing ground, with overhanging trees and bushes, protective stumps, and deeper pools. Mr. Woodhurst has done his part, and the remainder he will leave to the Coho. He has greatly enhanced a small portion of fish habitat and at the same time created a unique setting for his home.

When one considers the number of opportunities for similar small projects available throughout the lower mainland, the Fraser Valley and the Province, the total contribution to the resource could be considerable.

G.T. McIndoe
Special Projects Co-ordinator
Salmonid Enhancement Program

HERRING SPAWN ON KELP 1977

For the 1977 fishery, 127 new applications were received and rated. From these, 24 permits for 10 tons of product were issued. (In 1976, 21 permits were issued for 6 tons each.) Of the 24 permits for 1977, 11 were new and 13 were renewals.

Indians	11	Q.C.I.	10
Non-Status	2	Pt. Simpson	
Others	11	Prince Rupert	4
	24	Kitkatla	3
		Pender Hbr.	
		Powell River	6
		Johnstone Str.	1
			24

The product paid an average price of $4.70/lb. to the permit holder in 1977, with 265,043 lbs. produced compared to $3.50 in 1976 with 147,617 lbs. produced.

Eleven permit holders produced about 15,000 lbs. or greater with an average production for all permit holders of 11,043 lbs.

None of the permit holders reached his 10 ton quota and only 54% of the coastwide quota was reached.

Licences, rather than permits, will be issued for the 1978 fishery; each for 8 tons. The 24 permit holders will be issued licences for 1978. No licence fee will be imposed until Dr. Sol Sinclair completes his overall licencing study.

Dr. Johnson has stated that it is the goal for the herring spawn on kelp operation to encourage participation in remote coastal communities where few other employment opportunities exist. To that end, limited expansion will take place next year. Up to 5 new licences will be issued to Band Councils situated in remote communities.

Predictions for The New Year

As my faithful readers will know, at around this time, I have usually writ, for the improvement of my mind, the edification of the Department and a raise in the understanding of the world, my predictions for the comming yeare. On previous occasions I have set down the Months wherein great Actions and Events will come to pass and how they will affect Fisheries. I have had several letters of praise on my performance (albeit some were opened in the Post Office) and requests to repeat my style of several years ago to name names viz. who did what rather than record only the events. Apparently there is a greate human desire to know our neighbour's business and to observe his shortcomings. (This, I am told, is the superiority of black magic or voodoo as practiced in backward countries over our scientifique medicine. The former not only tells you what is wronge with you, it also tells you who caused it).

Again, I must lecture my readers on the Essence of the Thinge called Prediction. A knowledge of the various Humoures of Men, Fluxes and Conjunctions, Meridians and Tides nicely calculated by Tables and the new computers is all very well, but this method is no more than a snare and a delusion. I have found it essential in this business to have a firm knowledge of these regular sciences but more is necessary. To wit, there is no substitute for hanging loose about society and in the various grog-shoppes and watering holes of Fisheries people. From such Observation Posts it is possible then to make true and faithful Predictions as my previous successes have demonstrated.

Without further ado I venture into that greate sea of uncertainty and predict that the yeare 1978 will see greate changes in Fisheries and as evidence of this in January there will be a flurry of excitement as the Department now becomes on its owne, no longer allied with the people of Aire and Water (who were also much given to Predictions who nonetheless could not predict their own destiny). The singular evidence of how important this event will be is in the resurrection of the Committee on Uniforms, Caps, Buttons, Ties and Shewes. It is to be chaired by Dicksone MacKinnon, a Scot (it seems) well versed in heraldry, badges, shields and the use of double-knittes. The weather fine.

In February, the shortest of months, great activity yet againe a speech by Mr. Lucas, late of these partes, now of Ottawa, upon the future of the Fisheries. A transplanted New-found-lander comments that the future of Fisheries is all in the past. Some one puzzled at this remark but not those with knowledge of Irish Bulles.

In March, I infallibly predict, the herring roe season will get underway and supplicants will arrive at 1090 West Pender seeking warrants or charters to fish. Some ones granted boons and others dismissed. To a learned Docotor of Philosophies a fisherman is heard to remark: "I care not a figge, Newton for your policies". The learned doctor replies, "What is your beefe, stroganoff?" Much hilarity over this I know not why. Much March windes and some snow on high grounds.

In April unseasonable warmth and Silliness breaks out in the Finance section of the Stewardes. A Master Scolley or School-ey tries to restrain the merriment but the causes of it and the results are not clear. All I know of it is that something was exxed (axed?) out and others tried to flippe it in and the Main Estimate was somehow the same. Who knows what it all portends?

In May there are reports in the newssheets that fisheries is to undergo yet another re-organization. The source of the rumour is found to be the Committee on Uniforms who have a stock of Hattes they wish to sell and merely wished to give everyone a suitable hat. Dr. Johnston was not amused but the confusion is soon cleared up and he is given a nice hatte with a promise of a pretty suite to follow.

June comes too quick and Al Lill has not laid in a stock of oils and unguents (and some pomades) for use by his crewe in the Fielde to get a dusky complexion so stylish in most portes. Soon Dick Crouter's henchmen cry out for similar refinements viz, sunglasses, but he shames them. The Committee on Uniforms becomes involved yet againe. All hands compliment the Great Scott, MacKinnon on his judgment in the matter.

In June again unseasonable warmthe. The Economistes form a teame to play softball or rounders against a girl's schoole and are defeated. Mr. Reid (also a Scotte) says that this was his Planne. What it is no one can say. A junior economist or dismalist as they are known, says that the Plan was designed by geniouses for use by idiotes. Who is which he does not say.

Some rain but again warme. July is as usual quiet, the fishermen long since

departed for the grounds. The Clerkes in licensing given to smiling and salade-lunches. Both are strange practices in Fisheries but they are the best judge of their welfare. Some talk of marriage and others of travel.

Auguste has many strange events with fits of Rumoures, accusations and bad bile. It starts up-country with a group of milk-maides being affrighted by a group of vagabonds or brigands. Soon it is discovered that they are Salmon Enhancement crews. The High Sheriff is in error in calling them a groupe of "rapists, felons and murderers". Much excitement in the News-sheets on this. The High Sheriff meant poachers generally (or at least Wardens). Much confusion. No plums are reported stolen in any of the valleys or spawning areas.

In September still much chaos. MacLeod (yette another Scotte!) gets the Enhancement Crews out of some troubles by a neat display of letter-writing. Emissaries come from Nanaimo to discuss science and man yeares but no one available at West Pender to talk to them. De-centralization, holidays, Ottawa "cuttes", apathy, etc., are given as reasons. Dr. Ketchen, a noted mimic, imitates a possible dialogue to much amusement.

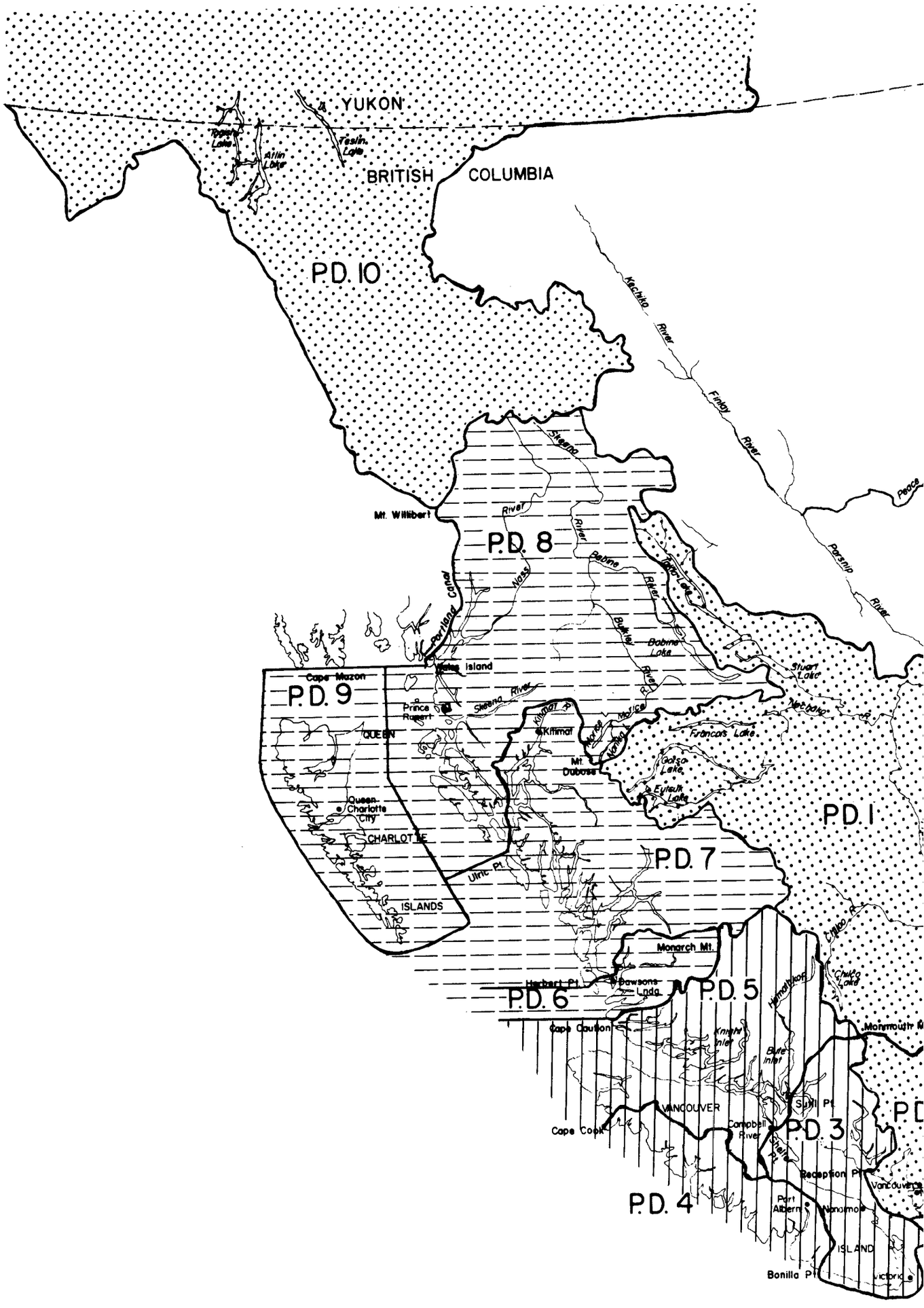
In October very quiet.

In November much elation in Fisheries as the new Uniforms are issued, Finance finds extra money and Personnel promotes everyone one grade and there are no complaints by the Public. But this is but a dreame received by a junior biologyste and he decides to become a poet. Forbes-Boyd is consulted on this and says that it is not unusual. Weather very badde, rain, high winds, stormes. Mistress Glover receives many requests for information on Russian magnetism, Dr. Hourston is consulted on his knowledge of weather (a well-known student of it and other matters) and there is nothing else upon the lips of the public. Fishermen have returned to their homes and can now count their money and begin their abuse of the department.

At long last December comes and looking back Fisheries people realize it was a very eventful year as many retirements of aged retainers ("class of 49"), succesful management of the fisheries, one or two deserved promotions (the others given to stoppe complaining) and no re-organizations in the Region. Ottawa has stayed out of Regional business and both parties find they are better off. The Christmas party goes well and all look forward to a new yeare.

This, Deare Reader, is the extent of my predictions and while it may cause offense in certain quarters I must remarke that it is only but the Truthe as best as I can discern it. God save the Queen and My Readers without Whom I would have aught to do.

The Ottawa Correspondent


YUKON
BRITISH COLUMBIA
Teslin Lake
Atlin Lake
P.D. 10
Mt. Wilmbert
Skeena River
Nass River
Babine Lake
Babine River
Bulkley River
Morice River
Morice Lake
Kitimat R.
Kitimat
Parkland Canal
Wales Island
Cape Mazon
P.D. 9
Prince Rupert
Skeena River
QUEEN
Queen Charlotte City
CHARLOTTE
ISLANDS
Ursul Pt.
P.D. 8
Kechika River
Finlay River
Peace
Parsnip River
Stuart Lake
Francois Lake
Fraser R.
Takla Lake
Trembleur Lake
Tatlatui Lake
Mt. Dubose
Tatlatui Lake
Evelyth Lake
P.D. 1
P.D. 7
Monarch Mt.
Hecate Pt.
Dawsons Landg
P.D. 6
P.D. 5
Cape Caution
Knight Inlet
Bute Inlet
Campbell River
Cape Cook
VANCOUVER
Spill Pt.
P.D. 3
Seymour R.
Reception Pt.
Port Alberni
Nanaimo
P.D. 4
ISLAND
Bonilla Pt.
Victoria

DEPARTMENT OF FISHERIES
PACIFIC REGION

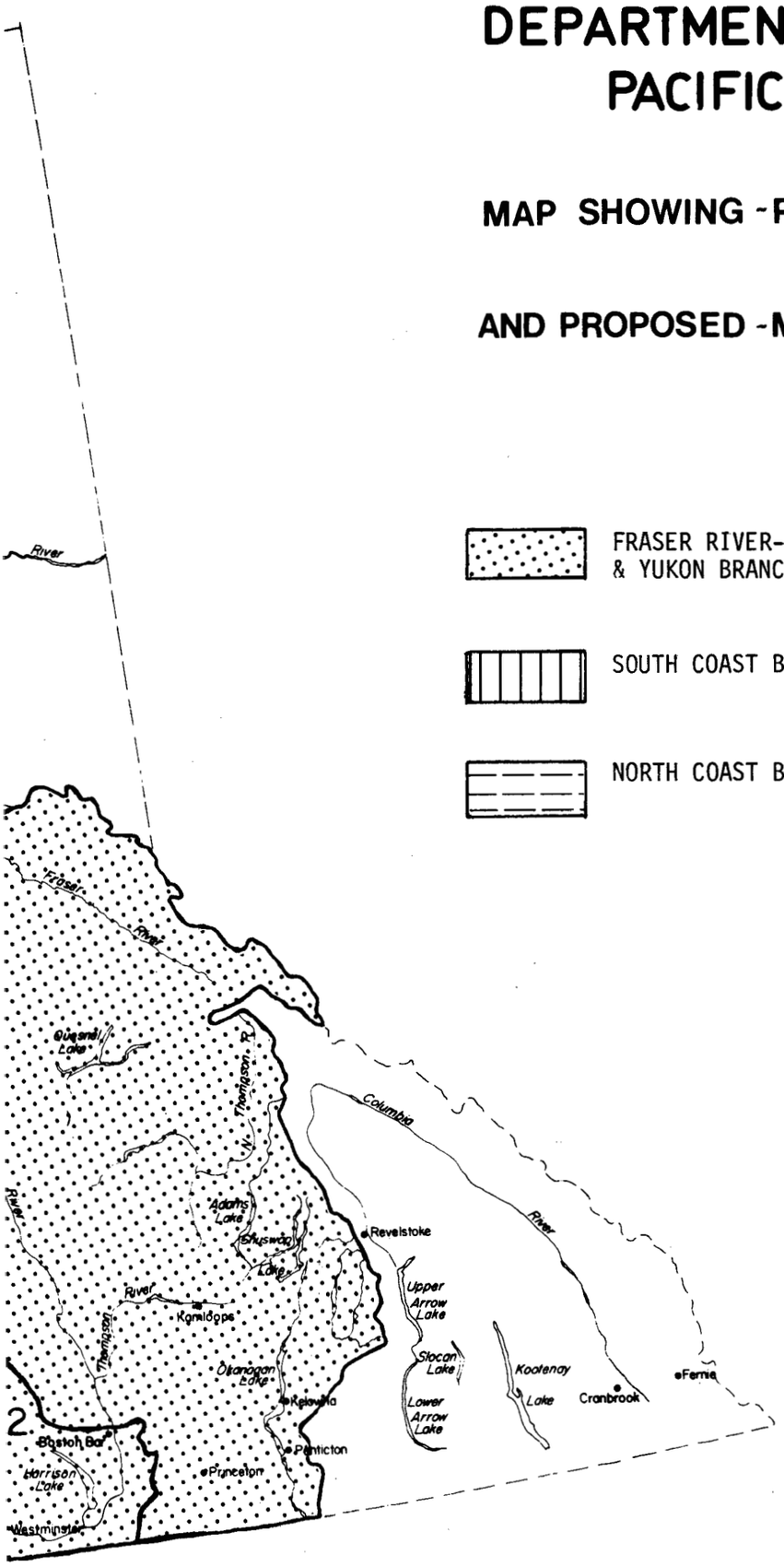
MAP SHOWING - PROTECTION DISTRICTS
(by number)

AND PROPOSED - MANAGEMENT BRANCHES
(by legend)

FRASER RIVER-NORTHERN B.C.
& YUKON BRANCH

SOUTH COAST BRANCH

NORTH COAST BRANCH



(COURTESY OF OPERATIONS ROOM)

BLANEY CREEK EGG TAKE

Of 100 salmon spawned, 85 to 90 perish within six months - long before they reach the sea. When salmon are spawned artificially - by combining eggs and milt (salmon sperm) in an incubation box, the odds are reversed.

Artificial spawning is one of the techniques being used in Fisheries' mammoth Salmonid Enhancement Program to raise populations of Pacific salmon. At Blaney Creek, near Mission, B.C. where these pictures were taken, 341,000 eggs removed from 122 female salmon in one morning's work were combined with milt from 61 males. The expected yield: roughly 306,900 salmon ready to journey to the Pacific.

Blaney Creek's incubators can handle up to half a million eggs at a time.

PHOTOS BY RON BAYNES

Fish must be bled before eggs are taken to ensure high fertilization rate.

Bill Foye(left) and Randy Godin(right) remove eggs from dead chum salmon. Average yield from one fish is 2,600 eggs.

Randy Godin takes scale samples from fish. Scales show biologists age of fish.

Joe Kambietz measures eggs by volume before pouring into the incubation box.

Bill Foye(left) and Don Bailey pour eggs into incubation box. The eggs are layered with gravel .

THE ACCEPTABLE SACRIFICE

Alive they are unlovable, which perhaps is why 180 were killed at Blaney Creek with little thought but for their young. Was this killing necessary?

Don Bailey gives the salmon enhancement message to visiting group of grade schoolers from New Westminster.

Proud student shows her sample of salmon eggs which she will take home for school fertilization project.

If we accept the need for more fish in our depleted oceans, then we must accept man's intervention in natural cycles of reproduction. But how much and how often?

HOW NATURAL?

Don Bailey, fisheries biologist, discussed the use of incubation boxes and spawning channels. Spawning channels allow fish to spawn naturally and die naturally, with the benefit of excellent man-made gravel conditions for the eggs. However, they have a hazard common to natural spawning conditions; fish may overlap in their spawning areas, digging up the eggs of another fish while laying their own eggs. Incubation boxes avoid this problem, and provide the best conditions for supplying oxygen rich water to the eggs. Water is "upwelled" through the layers of gravel and eggs in the box. Spawning channels, as in natural streams, have most of the water flowing over the surface of the gravel.

Probably the most important reason for the use of incubation boxes is their efficiency - they require a much smaller volume of water and land than the sprawling spawning channels. This is a valuable asset in an area such as the Fraser Valley where land and water are at a premium.

ECONOMY & ECOLOGY

With the incubation box technique, the female fish are always killed. The carcasses are returned to the river to provide nutrients in the water and food for small rodents, sea gulls and bears. But with the increasing number of this type of project under the Salmonid Enhancement Program, the use of fish carcasses becomes an important market.

The Japanese chum hatcheries give us valuable lessons in economy. There is no waste, all the spawned fish are used for human consumption. In Canada, where it is economical and a market available, we can visualize the development of fish meal as fertilizer, and as food for poultry, mink etc. Using the carcasses for smoked fish could also become a feasible product at sometime in the future. Because of emphasis on fish harvested from the ocean we have neglected this viable source of protein - the fish carcass.

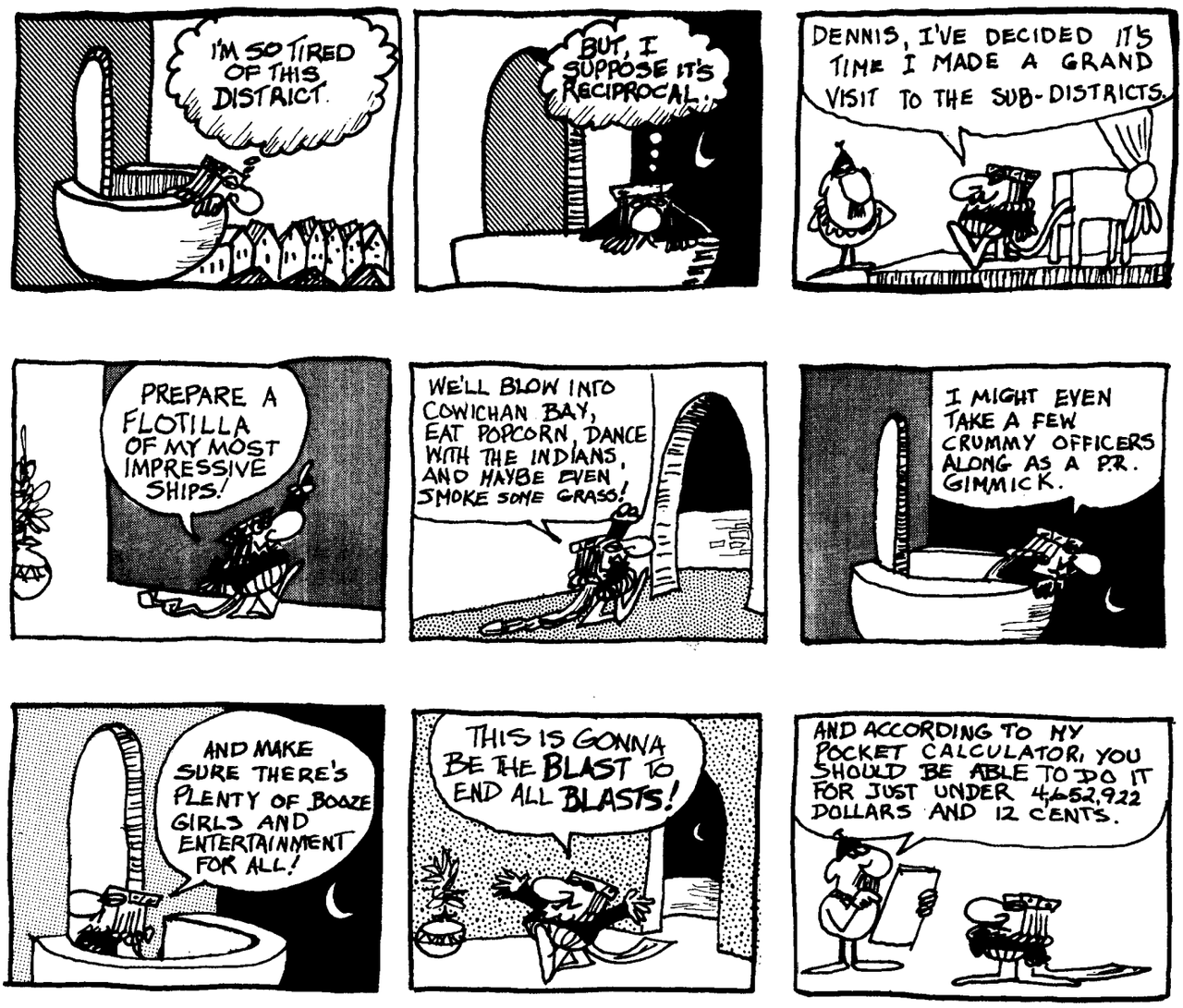
A BALANCE FOR THE FUTURE

Given all the above reasons for the use of incubation boxes as the best means we have of artificially reproducing fish, we could conclude that the ends justify the means. The final solution lies not in any one method, but a balance between the natural and the artificial.

Bev Bowler

the WIZARD of DISTRICT 3

A FLASHBACK TO THE DAYS OF JOE WHITMORE. TO "CELEBRATE" - COMMEMORATE? - THE RETIREMENT OF BILL WINSBY AND JOE FIELDEN, THE DISTRICT STAFF FORWARDED THE FOLLOWING:



FOR JOE FIELDEN'S GRAND TOUR SUBSTITUTE: "DISTRICT 5" FOR "DISTRICT 3" "RAY" FOR "DENNIS" "ALERT BAY" FOR "COWICHAN BAY", AND "DUNCAN BAY" FOR "LAGOON".

B.C. Benefits - GSMIP/Phamacare

On a couple of occasions recently I have been asked, "Why should I keep paying for GSMIP coverage? We've got universal Pharmacare in B.C. now, with the B.C. Hospital and medical plans as well, I am covered for everything."

Well, not quite everything. There is still plenty of scope for GSMIP coverage, but it is acknowledged that the GSMIP benefits are available only to the extent that the same benefits are not provided by the other plans. However, that having been said, let's look at what is available under GSMIP.

GSMIP coverage:

There are 17 different benefits listed under the heading "Major Medical Expense Benefits" and payment for prescribed drugs and medicines is only one of them.

There is a deductible of 25 dollars per person (maximum $40 per family) against the total benefits payable, and the Plan pays 80% of all costs over the deductible. In contrast, the Pharmacare deductible is 100 dollars per person and payment is for 80% of the cost of prescribed drugs and medicines over the deductible.

There is an additional Surgical Expense Benefit for certain types of oral surgery, with no deductible.

A small additional premium confers eligibility for up to $11 per day towards the extra cost for semi-private or private hospital accommodation, with no deductible.

This is not a put-down of Pharmacare, which is a good plan as well as being "free", but you did ask if it is worthwhile retaining GSMIP. As a matter of fact, Pharmacare and GSMIP can be used together to advantage. For example, suppose you have expenses of $200 for prescribed drugs in 1977. (Sounds like a lot but it works out neatly.)

First step: Claim your Pharmacare benefits. You will get 80% of the cost in excess of the deductible, i.e.$200 - $100 x 80% = $80. (Pharmacare will return all your receipts if you so request on the form - Ed.)

Second step: Claim from GSMIP in the normal way, sending all receipted bills. So far the cost to you has been $120. So you claim the difference between that cost and your deductible: $120 - $25 x 80% = $76.

Thus the combined reimbursement equals $80 plus $76 equals $156.

Before Pharmacare came into being the reimbursement from GSMIP alone would have been $140. So you see that you can gain by claiming from both plans. Of course if your total prescription expense is $100 or less you will have no claim on Pharmacare.

More detailed information is available in the GSMIP Pamphlet, Catalogue No. 7610-21-866-1306.

Ruth Orr, News Now
Canada Employment and
Immigration

Search & Rescue Plan Beefed Up

Multi-tasked: that's the new operational description for several vessels in our Marine fleet.

Since Cabinet and Treasury Board has approved the SAR plan for 1977-78 and forked over dollars and man-years, six of our vessels have now been tasked to search and rescue responsibilities in addition to their primary role of Fisheries surveillance.

On a 7 day week, 24 hour a day availability schedule, Tanu and Howay/Laurier (as one unit) will patrol west coast of Vancouver Island, west coast of Queen Charlotte Island and Queen Charlotte Sound; Arrow Post has responsibility for the east coast of the Charlottes; Chilco Post will work the Alert Bay area - upper Johnstone Strait and Queen Charlotte Strait; and the Kitimat II has responsibility for the Prince Rupert area.

All this comes about as a result of an overall effort to beef up Canada's Search and Rescue capability. There is now a National SAR Plan directed by an inter-departmental committee; National Defence is the lead agency, with DOT and DFE the other participants.

As in the past, direction for SAR on the Pacific coast will come from the Rescue Co-ordination centre (ROC) in Victoria. It will still remain the master's decision to carry out, or attempt to carry out, a rescue.

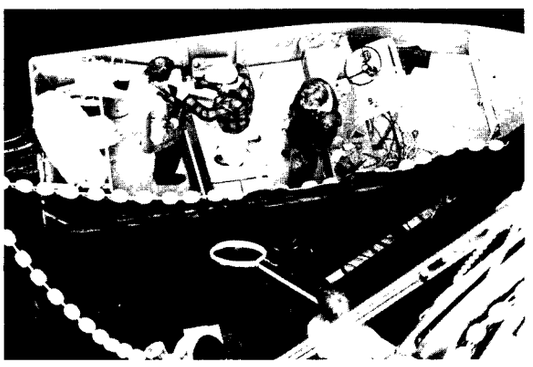
The intention is to have a scheduled leave system in place with two crews for each multi-tasked vessel, although details still have to be worked out with the unions representing the ships' officers and ships' crews.

One advantage for the crews would be a regular scheduling of time-off; the other will be official recognition for SAR activities - something they've done so well albeit unofficially for a long time.

Cowichan Bay Tagging/Recovery Operation

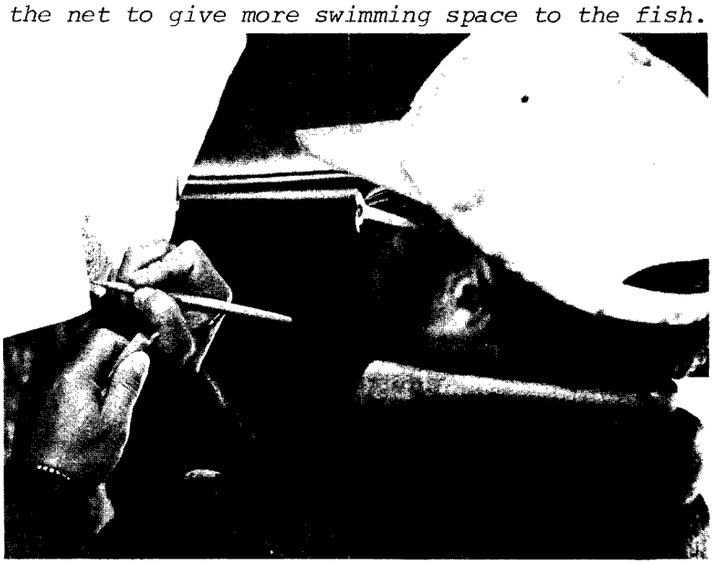
Hauling in the pursed net full of 100 - 200 springs or coho.

PHOTOGRAPHY
By AL SEWID

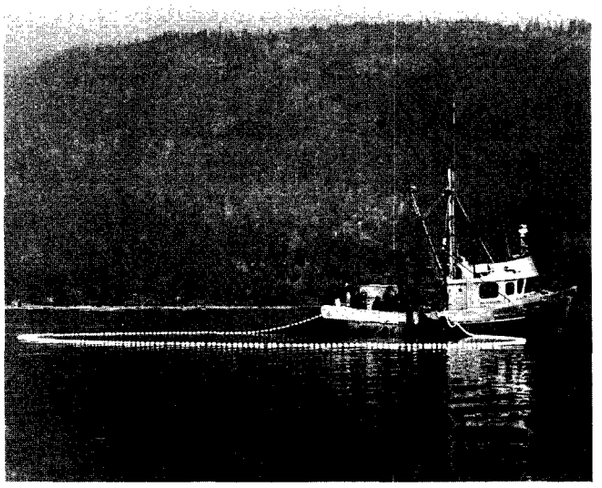


Drying up the net to make sure no fish are caught in folds; then lead cannon balls are dropped into the net to give more swimming space to the fish.

Tagging from skiff tied to stabilizer pole.



Bob Armstrong recording the data.



In the fall of 1977, a project was undertaken in the Cowichan River system on the east coast of Vancouver Island to study the returning coho and chinook spawners.

From Sept. 28 to Oct. 29 a purse seining operation was carried out to recover coded wire tags from returning 1974 brood adult coho tagged as downstream migrants in 1976. Information from this operation will provide evaluation of the "homing" instinct and an estimate of the estuary and spawning ground population.

In addition to recovery of previously tagged fish, 5,000 coho and 1,000 chinooks were tagged externally with spaghetti and disc tags. Recovery of the tags is now underway (December) to find out how fish have wondered within the river system and determine the contributions of different rearing areas to the total population.

Reorganization

On Tuesday, 29th November, a senior classification review board met in Ottawa to review the P.A.S.'s for positions reporting to Dr. Johnson. When the kinks have been worked out and all duly classified, an estimated 6 weeks will be required to staff them. The time will probably depend to some measure on the technicalities of competition - whether or not some will be national competitions and whether some posters have to be translated into French.

Next step will be the matter of developing the rest of the organization starting at the division level (as outlined in Dr. Johnson's original directive). P.A.S.'s at division level are presently being drafted but won't be finalized until branch directors have a chance to get involved.

Spurious Emissions

Keith Sandercock has won the competition for Program Advisor, Biological Sciences, S.E.P.

Gail Wolfe is leaving Accounts, moving to a career in the beauty business.

Dick Randle is the new finance officer.

Carol Drabsch, clerk in the Victoria office, is now Carol Hebdon.

Peggy Pasiuk has left the scale lab and is living in Terrace.

On a bill from Kits Cameras, "Your account is overdue, but the humans don't know yet. If you send payment I won't have to tell them."

Janet Van Loo has left Accounts to take up a career in music.

R.M. (Bob) Wowchuk, D.N. (Don) Housego, and J.B. (Hans) Segelken are the first 3 off-shore officers to take up duties - 3 more to follow shortly.

Wendy Grider is the new foreign licencing and commercial liaison clerk offshore commercial Fisheries Branch.

Its December again and the list of those retiring is a long one: Dixon MacKinnon, Jim Scott, Alex Strathdee, Wally Somers, Joe Fielden, Peter Dyck, Harold Richards, Wally Furlong and Bill Winsby.

Letters to the Editor

Dear Kate:

In most of the squibbs that I have sent to you and that you, very kindly, have published in the "Sounder", I tried to give a little bit of a laugh or a lift. If what I am now about to say is published, I stand a chance of being accused of being a dog in the manger - an epithet that does not fit the way I feel. In short, I am about to express a pet peeve.

I can pick up other publications, e.g. Fisheries & Marine News and I can see that a senior employee in Eastern Canada has been recognized for having survived as a Public Servant. Elsewhere I speak to a Crown corporation employee (non-management level) who, upon completing 25 years of service, was flown from the west coast of Vancouver Island to the corporation headquarters in Eastern Canada. There, he and his wife were wined and dined by the corporation's executives and they were given rather nice gifts.

It is a sad reflection on our Region that women and men employees in our Department not only pass the twenty-five years of service mark but they sometimes pass right out into retirement with little or no recognition of their acts of faithfulness.

A few years ago, when numbers of employees reached or had passed the 25-year stage, annual parades were held and appropriate pins and certificates were dished out along with a few kind words. This wasn't much but at least it was a means of saying 'thank you'.

I am particularly concerned about the many people who work and live in isolation from Regional Headquarters, for they are the foremost representatives of our Department to the public. Seldom seeing anyone from Headquarters, they go about their jobs trying to make sense out of direction and trying to mollify an angry public that doesn't always appreciate change. But who has ever made a point of calling these employees and their wives to Vancouver for a dinner and a night at the Q.E. in celebration of a 25th anniversary? Has anyone ever sent a letter, timed to be delivered on the anniversary day, to the long-term employee? No one!

No one has the time to write and no funds are available for entertainment. On the anniversary day, the employee opens the mail and spends the day trying to figure the latest directive and how he will explain it to his or her share of the public.

I think that I am a bit late with this letter, Kate. We are inbetween times and a bit short of old timers at present and I am rather saddened and more than a little bit ashamed.

John Robinson

Dear Kate:

Officer H. McNairnay is without question a very talented cartoonist, but the choice of the poem to accompany his art in the May-June issue of the SOUNDER raises a few doubts. If it was meant to be humourous it doesn't quite make it in that category, there are too many serious undercurrents.

Officer McNairnay generalizes by labelling all guardians as not being very efficient. Well, I can only speak for myself - a patrolman - and a lot is being done in my corner of the environment.

I have a group of prisoners from a Minimum Security Camp clearing logjams, practising rehabilitation in the word's truest meaning. Our pet project of this summer has been the installation of a spawning box where many local citizens participate. I felt like airing my opinion because it is so easy to criticize.

Come to think of, the bleary-eyed, bottle swinging individual of that cartoon could fit different members of our society, including the illustrious crowd of Fishery Officers. ...

Alfred Reder,
Patrolman,
Port Renfrew,B.C.

THE Sounder

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