Columbia River Gillnetter

Columbia River Fishermen's Protective Union — *Fall 1998 / Vol. 29, No. 2*

Scandinavian Station nettracks at the foot of 54th Street in East Astoria – Tongue Point visible to the right, Old-time gillnet boats powered mostly by 5h.p. engines – single cylinder Put! Put! Put! Railroad trestle to Portland in background. Sailing ships loading lumber from the Hammond Mill which is to the right, out of sight. This mill employed about 600 people and several hundred of them were Hindus and Chinese. The mill burned down in 1922.

Sally the Salmon Says...

Open the dams and let me through, concrete hot tubs are my demise, I need cold clear water to survive...

Season Update:

Quota left on Sturgeon: 4800 (as of Oct 16)

Youngs Bay Coho catch: 15,000 (3800 were predicted)

Sturgeon Season: 2 x 30 Hour periods per week till Nov 1.

Political Management by Fisheries People Eliminate Fall Commercial Fishing on the Columbia River

What happened to the Boldt decision which said 50% for the white eyes and 50% for the Indians? This formula no longer works when you have politics running the decisions.

The sport fishermen and the Indians are getting all the fish. The public which is entitled to its share gets nothing. There is too much guessing going on in the TAC Advisory Committee and the rest of the management. Everything is decided too late for the commercial man to get his share.

The charter boat organizations want all the sturgeon and salmon even though sports have already caught over 40,000 sturgeon this year. The charter boats are commercial fishermen.

In August of this year they came to the compact meeting (not themselves in person, but sent 4 sportsmen to testify for them). They read letters from the Ilwaco Charter Association of Ilwaco, Washington, Tiki Charters of Astoria, and Free Willy Bait and Tackle Charters, Hammond, Oregon, protesting a gillnet season of 12 hours in August by the gillnetters who have over 9,000 sturgeon still to catch in 1998. The quota for gillnetters is 13,800 for 1998. They expect gillnetters to go out in 70 mile gales or a snowstorm while they sit in their fancy boats and smoke cigars.

The charter boats have been having a ball this year charging $70 per person. They make up to $800 a day depending on boat size. Many charter boats are not owned by the skipper running them, but instead are owned by a corporation or by some lawyer, doctor, or what have you for a tax write-off. They contribute nothing to the enhancement of salmon runs or steelhead. Yet they want to set commercial fishing seasons to suit themselves. They are Johnny-come-lately and shouldn't have any say in setting commercial fishing seasons. Inside this paper on pages 21-22 are copies of their presentations.

As it turned out, our August 12 hours season only caught 365 salmon, not 800 like they inferred. Their assumption about the price of sturgeon is another fallacy.

Incidentally, one of the charter boat skippers has a gillnet fishing permit.

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Columbia River Gillnetter

One of the Oldest Conservation Unions on the West Coast—Since 1886

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1998

The following individuals have made a cash contribution to the Columbia River Gillnetter Publication. which will be used to purchase a computer system We thank them for their support!

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Secretary Report

Fellow Fishermen:

We started attending compact meetings on July 30th and up to now have taken part in eight. What we were trying to do is just get a fair share of the allowable harvest on Salmon, which is 25% of the 700 Snake River wild fish. At most of their meetings we kept telling the people that make the final decision, not to forget the lower river commercial fisnermen. Well, after attending the last compact meeting on the 22nd, It was clear that they just did that and this year even in a more unfair way than ever before.

After all the numbers were in, all the 25% of impact had been harvested, over 20% by treaty people and the rest by the sport industry. In our Aug 4 to 5th 12 hr and August 25th to 26, 2S

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Editorial

In regards to sturgeon seasons and other seasons, the Fishery Department has to give fishermen at least 24 hours notice of a season.

The only salmon season (10 hours) which was in the 2-5 Zone this year was only participated in by 17 fishermen because no one was notified.

In order to get ready in Astoria for a season above Portland, it takes at least 5 hours to trailer a boat up there and time to put a net in the boat and get supplies.

Please, management, heed our pleas.

Don Riswick, Editor

Support the Columbia River Gillnetter publication!

The *Columbia River Gillnetter* is the only remaining publication on the west coast devoted exclusively to gillnetting. We have been making a difference for more than 27 years, but our continued existence is threatened by increasing production and mailing costs. Now more than ever, we need a voice to represent our side of the issue, and the *Gillnetter* is our only contact with fishermen, lawmakers and the general public.

If you would like to help, send donations to
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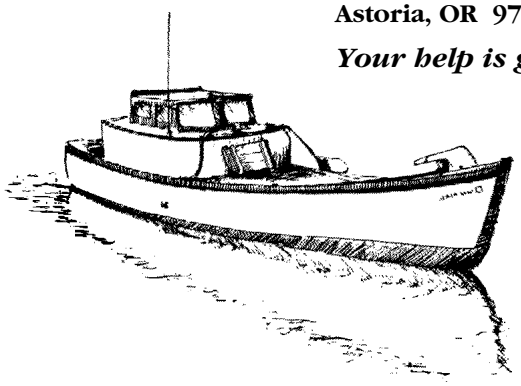
Your help is greatly appreciated



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The Columbia River Gillnetter is published seasonally for the Columbia River Fishermen's Union. Articles, letters and photographs are welcome for submission.

The Columbia River Compact

The Columbia River Compact is charged with congressional and statutory authority to adopt seasons and rules for Columbia River commercial fisheries. In recent years, the Compact has consisted of the Oregon and Washington agency directors, or their delegates, acting on behalf of the Oregon Fish and Wildlife Commission (OFWC), and most recently, the Washington Fish and Wildlife Commission (WFWC). In addition, the Columbia River treaty tribes have authority to regulate treaty Indian fisheries. When addressing commercial seasons for salmon, steelhead, and sturgeon, the Compact must consider the effect of the commercial fishery on escapement, treaty rights, and sport fisheries, as well as the impact on species listed under the Endangered Species Act (ESA).

Although the Compact has no authority to adopt sport fishing seasons or rules, it is an inherent responsibility of the Compact to address the allocation of limited resources between sport, commercial, and tribal users. This responsibility has become increasingly demanding in recent years. The Compact can be expected to be more conservative than in the past when considering fisheries that will impact Snake River salmon and Columbia River steelhead.

Zone 6 Sturgeon Allocation
Sturgeon harvest guidelines and sport/treaty commercial allocations have been reviewed annually since 1987 by the Sturgeon Management Task Force (SMTF) which is comprised of representatives from state fish management agencies and the Columbia River treaty Indian tribes. Guidelines are based on desired harvest rates and current stock assessments. In March of 1997, the SMTF agreed to pool-specific management with harvest guidelines based on optimum sustainable yield (OSY) designed to allow for survival of enough juvenile sturgeon through existing fisheries to increase broodstock and harvestable numbers. Current sturgeon size limits are 48-60 inches in all treaty Indian fisheries, 48-60 inches in sport fisheries in

Summary of 1998 Forecasts of Salmon and Steelhead Returns.

Species, stock	1997 Run*	1998 Forecast*	Comments
Fall chinook	323,200	232,800	
Upriver bright (URB)	161,700	141,700	Average return
Snake River wild (SRW)	2,059	1,888	Above average - similar to 1996-97
Mid-Columbia bright (MCB)	58,900	41,200	Average return
Bonneville upriver bright (BUB)	28,700	17,700	
Pool upriver bright (PUB)	30,300	23,500	
Lower river bright (LRB)	—	3,800	Formerly a component of the BUB stock
Bonneville pool hatchery (BPH)	27,400	14,200	Worst in 10 years
Lower river hatchery (LRH)	57,400	22,500	Record low return
Lower river wild (LRW)	12,300	7,000	Record low (influenced by floods)
Select Area Bright (SAB)	3,800	2,400	Below average return
Upriver summer steelhead	262,000	272,300	Above average - Similar to 1997
A-run (date method)	179,400	185,800	Wild fish continue to decline
B-run (date method)	82,600	86,500	Wild fish continue to decline
A-run (length method)	218,300	231,800	More than date method prediction
B-run (length method)	38,500	40,500	Less than date method prediction
Coho	149,900	73,300	Record low
Early stock	105,300	52,100	2nd worst return (1983 El Nino worse)
Late stock	44,600	21,200	2nd worst return

* Columbia River mouth.

The Dalles and John Day reservoirs, and 42-60 inches in Bonneville Reservoir sport fisheries.

Sturgeon harvest guidelines increased in 1997 and again in 1998 as updated stock assessments indicated these sturgeon populations were rebuilding under the harvest restrictions implemented by the SMTF (Table 10). Allocation is approximately 50:50 between sport and tribal fisheries although reservoir-specific guidelines are shaped to meet fishery demands. For instance, the sport fishery is allowed a greater share of the Bonneville Reservoir harvest while the treaty Indian fishery is allowed a greater share of the John Day Reservoir harvest. Treaty Indian fishers may continue to take sturgeon for subsistence purposes following closure of commercial seasons. Subsistence harvest is estimated through a monitoring program conducted by the YIN and averages 300 sturgeon in addition to the guideline. Sport anglers may continue to fish for sturgeon and release them unharmed following closure of sport retention seasons.

Zone 6 Sturgeon Harvest Guidelines

Reservoir / Fishery	1991-96	1997	1998
Bonneville	2,600	2,820	2,820
Sport	1,350	1,520	1,520
Treaty Commercial	1,250	1,300	1,300
The Dalles	400	600	1,800
Sport	100	200	600-800
Treaty Commercial	300	400	1,000-1,200
John Day	200	1,720	1,720
Sport	100	560	560
Treaty Commercial	100	1,160	1,160

The Columbia River Estuary: How Important is it in the Salmon Recovery. Effort?

by Jon Westerholm

The Columbia River Estuary: How Important is it in the Salmon Recovery Effort?

The Columbia River estuary is that part of the river that is affected by the ocean tides and salt water. Estuaries are characterized by a fanning out of the stream, with shallower, smaller channels and large marshy areas. We on the lower river generally refer to the estuary of the Columbia as that area from the mouth to Puget Island at River mile 46.

Estuaries are critical to many species of fish and wildlife. Naturally rich in nutrients, they offer food and shelter to many fish that will eventually live in the ocean. Salmon fingerlings traveling down the Columbia River on their way to the Pacific Ocean, make their adaptation from fresh to salt water and become smolts in this area. The Columbia River estuary is a living lab that mirrors everything that is going on in the rest of the river.

In relation to salmon recovery on the Columbia, dredging action on the ship channel to Portland and the depositing of the resulting materials creates one of the most potentially dangerous situations to the ocean migrating juvenile salmonids. The estuary environment as critical in importance as it is to the salmon life cycle is very fragile and can easily be damaged.

The channel deepening proposal, if put into reality, would create more low water sandbars and less side channel water in estuary areas away from the main channel. This is the area that is so critical in the natural environmental food chain for young salmon smolts. It doesn't seem advisable to take any chances on altering the estuary any more than it already is.

With both the dredged material management study for the present 40 ft. channel and the Port of Portland's proposed deepening project to 43 ft., there is a very serious concern about the planned stock piling of much of this material up to 40 ft. and higher along the channel. Because they create such a new and different environment, three sites of particular concern in the middle estuary are Jim Crow Sand, Miller Sand, and Rice Island. These very islands, besides covering up critical wetlands, are providing a convenient roosting and nesting ground for Caspian terns, one of the deadliest of feeding birds on salmon fingerlings.

Research from scientific studies indicate that these terns alone are consuming up to 15 million salmon smolts a year, or 30 to 40 percent of the total downstream migrants left after running the gauntlet of dams upriver.

The U.S. Corp of Engineers is providing the neutral studies and roundtable meetings for public input before environment impact statements are made. Everyone needs to participate in this process in the upcoming sessions this summer. With this information in mind we can ask such questions as:

Should we look at the environmental benefits of not deepening the ship channel?

At what point are salmon in the Columbia worth as much as industry and development?

Are we really serious about wanting to leave salmon in the Columbia River for future generations to enjoy?

Whose river is it?

Dear Don Riswick,

I am writing in regards to the article entitled "Michigan Slashed and Burned: The Great Lakes State's early logging history stands as a lesson for Northwest to protect natural resources" by J.P. Meyers, which appeared in your winter 1997 publication. As a professional forester working for a small, family owned, timber company in the southern Willamette valley, I found myself unsurprised by the content of this piece, but disturbed that your publication would print such a one-sided, uninformed article as this.

Having grown up in Astoria and having had a father and younger brother who fished commercially on the lower Columbia, in addition to working within an industry going through similar changes, I understand and can relate to the what it is like to have your livelihoods seemingly taken away from you. The purpose of this editorial is not to attack the inconsistencies and errors inherent in Mr. Meyers column, to do so would take more energy than it's worth and I trust that your readers will recognize the extreme environmental approach with which it was written. Suffice it to say that as an industry we are facing the problems we face primarily because the environmental community has been successful in pushing harvests on federal forests to pre-depression levels with 2.5% of the Federal forest's annual growth being harvested annually. While this has forced private owners to become much more intensive in their management, to meet the needs of a growing nation, it in no way means that private lands are being poorly managed. To the contrary, it means that private timber lands in the state of Oregon are being managed more environmentally consciously than ever before, after all this is our livelihoods and an investment in our futures.

In closing I would like to touch upon the salmon situation in the northwest. I have found your industry to be quite good at pointing fingers when it comes to identifying who is to blame for our dwindling runs. Pointing fingers will do nothing more than to polarize two industries that should be working together to solve the problem. The timber industry has taken more than it's fair share of lumps over this and other issues in the past, while at the same time having been one of the most regulated industrial sectors in the state. As I see it, forest practices, commercial and sport fishing pressures, escalating seal and sea lion populations, hydro-electric structures, natural population cycles, and agricultural practices along lower reaches of our state's waterways are the most significant issues at play in the current salmon situation. So for the sake of all of our livelihoods, lets stop the name calling and fingerpointing, and band together to solve the problems we are facing.

George H. Severson, Eugene, Oregon

District 5 News

Our fellow rural natural harvesters: timber, is facing the same type of initiative that we as commercial fisherman faced in 1990 and 1992. Although initiative #64 is written as a clear-cut ban, the requirements would only allow one thinning, after that, the timberlands would be off limits to further harvest. I don't need to tell you what this would do to our rural economies.

One issue that has been by-passed is the effect of a total ban on clear-cutting will have on wildlife. On the surface it would seem that the ban would help wildlife; however this may not be the case. Elk and deer plus other wildlife browse in large part in open areas, i.e. clearcuts growing back into forest. The food value is much higher in protein because of sunlight, shrubs growing in shade is too low in food value to carry big-game through the critical winters. Nature provides opening either through natural fires or windstorms and game travel far to feed in these areas.

As timber manager of a sawmill, I have daily contact with loggers; one day an owner of a logging outfit was just fit to be tied about the initiative that would destroy his business that took him a lifetime to build;this reminded me of his trade group *Associated Loggers of Oregon* voting to destroy out industry & jobs in the 1990' anti-fishing bill. He had never heard of ALO position and said anyone in favor was pretty stupid. After that I ask other owners of logging outfits and only one was in favor of ALO, out of the twelve or so. It appears ALO is complete out of touch with their own loggers, most were simply aghast that ALO would favor sports over commercial fishing.

This initiative system must be changed if we and timber are to survive. Going to the legislature to make the initiative be a truly state wide instead of paid signatures gathers in the Portland Mall would be one step in the fight direction.

Mark Laukkanen
District #5

Local Test Fishing Report

Local Gillnetter Test Fishing Sturgeon in Winchester Bay, Coos Bay and Tillamook Bay

Gillnetting has long been outlawed in the Umpqua River, but Frank Tarabochia was here last week on special assignment. A large green and black sign on the side of Ten Grand's wheelhouse declared her mission in a single word: "Research."

The Oregon Department of Fish and Wildlife contracted with Tarabochia to capture sturgeon so they can be marked with a coded wire tag, then released.

Information about where and when the fish are recaptured later in life — and about how large they are at the time — will shed more light on the life history of one of nature's oldest creatures that evolved to live in both freshwater and saltwater.

"It's just an incredible operation to watch," said Jarmain, who invited a pair of outdoor writers and Dave Loomis, the ODFW's resident fish biologist for the Umpqua Fish District, to spend a day fishing within sight and earshot of the research vessel.

Sturgeon after sturgeon — as many as 66 a day — being pulled onto the deck of the vessel Ten Grand, captained by Frank Tarabochia of Astoria.

Of course, Tarabochia wasn't using hook and line to catch the sturgeon, like Jarmain always has. The Ten Grand is a commercial gillnetter and the fish she brought in were snared in the 1,300 feet of netting Tarabochia's crew retrieved with a huge mechanized drum mounted on the foredeck.

Tarabochia and one crewman worked to free a sturgeon from the net, then passed it on to Jeff Whistler, an ODFW employee who measured the fish and inserted a numbered wire tag in its back. Whistler also removed one of the bony, scale-like plates called scutes from the fish's back and another from its side before dropping it overboard. The pattern of the missing scutes serve to mark the fish in case the tag falls out.

Whistler was kept plenty busy on that first pull of the net. At times, two or three sturgeon were suspended between the waterline and a bow rail, waiting their turn to come aboard.

By the end of the week, 159 white sturgeon would be captured and tagged in Winchester Bay. Of those, three were "recaptures" from earlier in the week and two were sturgeon that had been tagged previously in the Columbia River. The Columbia is the primary "nursery" for white sturgeon on the West Coast, and an extensive tagging program has been under way there for years.

"It's a very healthy population," said John DeVore, a Washington state fish biologist in charge of monitoring tagging data for the Columbia. "We estimate there are over one million sturgeon that are two feet or greater in length in the river at any one time."

That doesn't include migrants that are out feeding along up and down the coast, which the biologists don't know much about. That's why they initiated the estuary sampling and tagging program, using a grant from the Northwest Emergency Assistance Program, which employs out-of-work commercial fishermen.

"This program provides a unique opportunity for us to conduct a sampling program that we could not otherwise afford to undertake," said Kevleen Melcher, an ODFW fish biologist responsible for sturgeon tagging in Oregon.

The week of tagging activity in Winchester Bay cost about $5,000, Melcher said, including the expense of transporting the Ten Grand to Winchester Bay.

Sturgeon populations are still recovering from over-harvest that occurred at about the turn of the century, DeVore said. Historical records indicate that more than 5.5 million pounds of white sturgeon were taken out of the Columbia in 1892, mostly to supply the caviar trade. Those fish weighed an average of 150 pounds each, DeVore said.

The current sturgeon management plan adopted by Oregon and Washington limits the harvest to 67,000 sturgeon per year. Commercial gillnetters like Tarabochia are allocated 20 percent of the harvest and may keep only those fish measuring between 48 and 60 inches. Sport anglers get the other 80 percent of the quota, and are allowed a slightly wider slot limit, 42 to 60 inches.

In the Columbia sturgeon fishery, however, more than 90 percent of the sport-caught fish are undersized and have to be released.

But the ratio is just the opposite in Winchester Bay, according to Jarmain. "It's been running 90 percent keepers here," he said.

Data from the Ten Grand's catch wasn't quite that dramatic. Of the 160 white sturgeon tagged, 114 were within the sport slot limit.

"We're not seeing a lot of small fish in these estuaries," Melcher said. "That may indicate that sturgeon either have to be a certain size to leave freshwater and go into the ocean, or maybe their life history is such that they don't do that until a certain age."

"As far as we can tell, there is no real obvious patterns to their migrations in and out of Columbia," DeVore said.

One pattern that Jarmain and others have noticed is that sturgeon fishing in coastal estuaries has been improving readily in recent years.

DeVore suspects that results from the Columbia River sturgeon population growing to the point where finding enough bed is becoming difficult, leading more and more fish to go on foraging expeditions up and down the coast.

"We're seeing more fish in many coastal bays and estuaries and in Puget Sound," he said. "We may be coming up against the carrying capacity of the Columbia."

To the Editor

Dear Don "Gaff Hook" Riswick, Editor

Your "Columbia River Gillnetter" publication is always received with anticipation of the contents you have included for the readers interest. I have especially enjoyed reading the letters sent to you by other readers.

I refer to Cecil Moberg's seining years, Herb Johanson's seining on Welch and Van Dusen Sands for Ken Parker, Faville Richey's on Miller and Kaboth Grounds, and Bob Friedrich's on Desdemona Sands.

Faville and I were close neighbors at 14th and Jerome Avenue in Astoria straight up the hill from the Astor Hotel. Bob was further away near the old Central Grade School, later renamed Lewis & Clark. The building was demolished a few years ago, after many years of vacancy. I knew Herb slightly, being students at Astoria High in 1935-36. Bob's father, a dentist with offices in the Spexarth Bldg on Commercial Street, filled a number of my cavities.

Faville mentioned living a block from Cecil (Moonlight) Smith. Perhaps he inadvertently used Cecil from Moberg as the first name rather than Chesley Smith. Chesley reportedly got the name "Moonlight" from the practice of fishing the late night tides normally not fished because of darkness and long hours. Chesley's son, Bob, wrote an interesting article on his dad's seining life. It was published in the Clatsop County Historical Society quarterly CUMTUX several years ago. I knew Bob and the family as neighbors. Their beautiful home still sits on Jerome Avenue near 14th.

Coming from a family of towboat and cannery tender skippers and a grandfather who owned a fish trap offshore from the historical church at McGowan, Wash., I acquired a close relationship with the marine and fishing industries of the lower Columbia River at an early age. I spent my summer school vacations working on the fish trap with my grandfather. Oh! what days they were for a young boy! I sometimes think about what was and what isn't any more today. A real passage of time and history. The fish traps and seines were voted out in the State of Washington by Initiative 77 in 1934. Oregon followed, I believe in the 50's. (47-48?)

I decked (deck hand) for my uncle August Nelson on the CRPA (later Bumble Bee) cannery tender ASTOR several seasons. I recall one season (1938). We picked up fall fish in September from Kaboth Grounds. Roscoe Miles was running the show. We packed 27 ton a day for 3 days to the Elmore cannery till the run declined.

One fall season we were sent upriver to help out at the cannery at Ellsworth midway between Vancouver and Camas, Washington. We picked up fish at Corbett from the Mt. Pleasant gillnet drift and a small beach seining operation directly below the Vista House on the famed old Columbia River Gorge highway.

Cans were made at the can factory adjacent to Elmore cannery, Astoria, and transported to Ellsworth in a covered scow. When packed with salmon, the load would be returned to Astoria for labeling, storage and shipping.

Some of our pickup locations were Ilwaco, Pt. Ellice, Megler, North Shore, Woody Island, Clifton, and the Astoria waterfront stations below Tongue Point. Among the other tenders were CRPA, Diehless, Leader, Golden Age, and Molly Lou. The Unga made the Newport run as did the CRPA #2.

One of the old seine bosses was Henry Pice, mentioned in Cecil Moberg's story. I became acquainted with Henry when he was running the Jim Crow grounds near Woody Island. When the season was over, he would move one of his housing floats to Mud Slough in Russian Island out from Svensen, Oregon. I hunted ducks out of this float several seasons ('34-'36) together with my uncle August on weekends. Henry and his partner Chris usually hunted during the midweek, but would sometimes stay over.

For those who may ask where did this moniker "Gaff Hook" come from? I should clarify. The year 1937-38 showed a number of Astoria boys enrolled at Oregon State College, Corvallis, and living at the Delta Tau Chapter Sigma Nu fraternity. Among the group was Don and myself. It soon became known of Don's early and long involvement with the gillnet salmon fishery and association tools of the trade, namely, a gaff hook. Hence, the nickname evolved and is still used occasionally by the few who knew him during this period. Don and I were neighbors at 45th and Commercial, Alderbrook area in Astoria in the mid-1920's. We attended the old Alderbrook school near 50th and Leif Ericson Drive. Another victim of time. Those were the good days. It still think of them with fondness.

Harold "Harry" Nelson

Columbia River Packers Association at South Naknek, Alaska

by Mel Hjorten

The village of South Naknek is named after the Naknek River which runs into Kvichak Bay, part of Bristol Bay. Already having a cannery at Nushagak, Bristol Bay it was decided by Mr. W. L. Thompson, president of C.R.P.A. Astoria, to build a new cannery on the south side of the Naknek River. A site was purchased there near the mouth of the river (1905?).

In 1938 the preliminary ground work was done by Astoria crews. This entailed property clearing, building layouts, foundations and piledriving.

During the spring of 1939, the C.R.P.A. owned ship "W. L. THOMPSON" left Astoria docks loaded with all of the building materials, cannery machinery, all necessary food and supplies to last through the building period and summer fishing season. Mr. W. B. Wooton was in charge of the huge project and had hired construction crews, fishermen and knowledgeable cannery people, etc.

The cannery was operational in time for the mid June to August 1939 season and was a huge undertaking by C.R.P.A. At that time all fishing was done using wooden sailboats. The length limit on boats was 32 feet and the company furnished living quarters, food, boats, nets and supplies. The price per fish (sockeye salmon) that year offered to the Alaska Fishermen's Union was 18¢ per fish. Sockeye, or red salmon, was the predominant catch. Later in the season pink salmon were caught, but fishermen received only 1/4¢ per fish.

Only sailboats were allowed on Bristol Bay until 1952. The only fuel propelled boats were called "monkey boats" Canneries each had about four of them. They varied in length from 32' to 38' and were powered by a gasoline engine.

The monkey boats were used to transport fishermen to and from their sailboats, which were anchored in the river away from the docks during bad weather. They were also used at times to tow fishboats to the various fishing areas about the bay. Many times they saved men and boats in trouble, and once the season opened it was their main purpose.

Power scows, which received the fish from the gillnetters, were built of wood and average size was 80' x 26' They were flat bottomed and propelled by two diesel engines. Three-fourths of the deck area enclosed fish bins. Aft was the crew's quarters, galley, and wheelhouse. The crew consisted of captain, engineer, cook and two tallymen. Power scows anchored in various locations and received fish. Tallymen counted each fish that was pitched aboard and recorded same. C.R.P.A. power scows could haul approximately 40,000 sockeye salmon, which averaged 6 pounds apiece. Each day the scows would return to the cannery to unload fish for canning. The sailboat fishermen were allowed to eat a meal aboard the scow after a fish delivery if they wished to do so.

It was said that the U S. Dept. of Fisheries would not allow fishboats to use gasoline engines in Bristol Bay because of the fear of water contamination by the thousands of boats.

In the summer of 1951 the Fisheries people decided to allow power boats beginning in 1952. This of course was to be a huge rush for companies to convert. It would be impossible to build the hundreds of new boats in one winter. C.R.P.A. and all larger canneries, with big fleets, decided the quickest way would be to convert their sailboats to power.

One sailboat was brought from Alaska to C.R.P.A. shipyard at Astoria, Oregon. Mr. A. Lindstrom, shipyard superintendent at the time, and Mel Hjorten, who had Bristol Bay experience, were given the task of the conversion from sail to power.

The centerboard was removed from the keel, a 42 H.P. Gray Lugger engine installed, along with a 40 gallon fuel tank. The stern was cut out for propeller and shafting, the rudder was modified, hydraulics installed for a power pick-up roller and a small cabin installed forward.

After completing one "conversion" and testing at C.R.P.A. shipyard, it was decided to go ahead and build all necessary parts, order 85 engines and have them ready by March of 1952.

In early March Mr. Ralph Hendrickson, who was Naknek cannery superintendent, his assistant Mr. Warner Leonardo, Mel Hjorten and three other shipwrights left Astoria for Naknek to accomplish the task of sailboat conversion. All parts were flown from the Astoria airport to King Salmon Air Base (20 miles up the Naknek River) by Flying Tigers airlines.

Upon arriving at Naknek the small crew found it to be the coldest part of Bristol Bay winter. The Naknek River was frozen solid from King Salmon to about five miles upstream from the cannery. From that point the ice was huge broken cakes of ice, caused by tides. A sled was built using piling skids with a 3 x 12 wooden deck. Leonardo and the company winterman loaded the planes' cargo onto the sled. This was towed down from the frozen river to the broken ice using a company surplus jeep, then towed with a Caterpillar tractor the remaining 5 miles over the frozen tundra to the cannery. All parts and equipment were slid down hill by hand to the warehouses where boats were stored. After several round trips up and down the frozen river work began on the fishboats.

The weather was bitterly cold, at times down to 30° below zero, with north winds to approximately 40 mph. Eskimos and other South Naknek men were not anxious to help with work, as they said it felt better to stay home by the oil stove.

Before leaving Astoria, Mr. Hendrickson had figured that the crew could eat and sleep in the winterman's house as it was built with thick walls and well insulated with sawdust. It was found to be too small as the winterman George Gottschalk and family, as well as the assistant winterman, occupied most of the available space.

It was decided that the crew of four men would live in a small "cook shack" built on posts about four feet above ground with no insulation. Walls were of shiplap, cedar shingle covered and interior of 1/4" plywood. Inside was a 'Spark' oil heater. The crew found the oil to the heating stove was thicker than honey and would not flow because of the severe cold. They removed the oil stove and installed a 'pot-bellied' coal stove. The bedrooms were so cold, one could write his name on the frosted walls in the mornings. After draping sailboat sails around the lower section of the house and covering beds with about eight army blankets, the men were able to sleep in near comfort.

A small part of a room in the winterman's house was used for preparing and eating meals. The house had the only running water in camp, supplied by a deep well in the interior where it would not freeze. Warner Leonardo and Mr. Teigland (assistant winterman) attempted to serve as cooks. Crews had many laughs about the menus. The eggs in the warehouse were rotten, so some of the men journeyed out and picked up fresh seagull eggs. Some of the meat, bacon, etc., was green with mold but after scraping with a sharp knife the cook said it was edible if "you close your eyes and hold your nose." Ptarmigan were also shot for the table.

During the first month of the cold weather, the men worked eleven hours a day, eight hours if below zero. When the weather warmed, they worked 15 to 16 hours every day of the week. Three sailboats at a time were towed in to the carpenter shop from the warehouses where they were stored. After the men had accomplished the necessary modifications to a few boats, it became easier as everyone knew exactly what was required.

About May 1st, a few more men were flown in from Astoria. In the group were two machinists, Mr. Kelm and Mr. Chisholm. Also two mechanics, a welder and finally a cook, Mark Adams.

The work of the machinists and mechanics on the boats required battery installation, necessary wiring and lights, engine hook-up with fuel lines, throttle and clutch, plus a hydraulic pump and pick-up roller. The first 40" wide hydraulic rollers were manufactured at the C.R.P.A. shipyard machine shop. All propeller shafting, control levers, fuel tanks and other parts were built there also.

It was hoped that by mid May, fishermen and other cannery people would arrive, but because of a price dispute, the Alaska Fishermen's Union, and also Bering Sea Fishermen's Union would not release their people. By the time the fish. price was settled (26¢ per sockeye, 75¢ per king under 15 lbs, and $1.50 per king salmon over 15 lbs.) and people began to arrive in South Naknek, 69 of the converted sailboats were completed and ready to go. This was June and with the help of a few fisherman-carpenters, all 85 boats were in the water ready for the opening of the 1952 fishing season. During the following four years, the converted sailboats were replaced by new bowpickers and sternpickers built at C.R.P.A. shipyard.

A Changing Columbia Basin 1770-Present

Since the 1700s, when the human impact on salmon was limited to native fisheries, salmon have been increasingly affected by the Northwest's growing population and economy.

The first major European impact on the natives of the Columbia River occurred in the 1770s; by the mid-1800s, European diseases had reduced their population by 90% and the Columbia's resources were being exploited for the benefit of the European population. By the 1890s, dams were significantly affecting salmon runs; hydroelectric and flood-control projects eventually reduced the area available to salmon by half. Salmon of the Columbia are also affected by grazing, irrigation, logging, mining, overfishing, pollution, urbanization, ocean conditions, and predators.

As the Northwest's population and economy grow, the future of wild salmon is uncertain. Plans for improving the status of salmon have become increasingly common, but many projects simply undo the damage caused by previous generations of well-intentioned developers. A historicalperspective is essential for understanding the current and future status of salmon and steelhead in the Columbia Basin.

How has the Columbia changed from 1770s to the present? These maps and graphs illustrate how humans have altered the river and how these alterations have affected Salmon survival.

"We were but few, while the white men were many... we could not hold our own with them. We were like deer. They were like grizzly bears .... We were contented to let things remain as the Great Spirit Chief made them. They were not; and would change the rivers and mountains if they did not suit them."
—Chief Joseph of the Nez Percé, c. 1879.

"To build an industrial empire from the wasted power of the Columbia... They moved mountains and froze a land slide .... Bonneville and Grand Coulee are only the beginning. Ten million horsepower of new energy swiftly can be harnessed on America's mightiest stream. Tame the hazardous rapids. Open the Columbia waterway to navigation 500 miles inland. Provide endless water power... Reclaim another million acres of dry but fertile land."
—BPA film "The Columbia," c. 1950

A Changing Columbia Basin
1770-Present

"Fish are to the northwest what wheat is to Kansas. Fish are this big integrator. They spawn 900 miles inland and they travel to the ocean all along the coast. They bind this region together." —Ed Chaney (Idaho fishery consultant). "Salmon are part of the heart and soul of the Pacific Northwest. They have defined its history, and its culture, and hopefully its future." —Will Stelle Jr. (National Marine Fisheries Service)

These pies show the relative size of returning salmon runs from 1770 to the present. They compare in-river harvest, dam-induced mortality, and other losses caused by habitat destruction, escapement, and predation. In addition to adult mortality, run decline is a result of reduced numbers of smolts migrating to the ocean (due to habitat destruction, dams, urbanization, and other human activities). Fishing reductions in 1990 have resulted in an increased percentage of natural mortality.

These numbers apply only to returning Columbia River salmon and do not include troll fisheries, ocean by-catch, El Nino or other factors. Since Columbia River salmon range far north during their life in the ocean, ocean mortality is an important factor in their population size. Upriver bright fall Chinook salmon (URBs), which spawn in the Hanford Reach—the last undammed stretch of the Columbia—are a good example. In 1985-94 the Canadian fishery was responsible for 48.9% of URB fishing mortality, while Alaskan trollers accounted for 29.8%. (Source: Pacific Salmon Commission Joint Chinook Technical Committee 1994 Annual Report).

Causes of salmon mortality 1770-present

Mortality circa 1770:

Natural mortality of salmon is due to factors like natural death after spawning; predators, including mammals, birds, and other fish; and naturally occurring population fluctuations caused by ocean and river conditions. Tribal fisheries are the only human effects at this time.

Mortality circa 1940:

The ratio of natural mortality declines due to commercial fishing. Trapping of beaver reduces rearing habitat in beaver ponds; overgrazing damages streamside vegetation; river corridors and estuaries are affected by urbanization; the use of splash dams for logging destroys stream beds; hydroelectric facilities and irrigation dams on tributaries block access to

spawning areas; water drawn for irrigation, industry, cities, and towns reduces river flow; and water quality is degraded by a wide variety of causes.

Mortality circa 1996:

Mortality in the ocean increases with El Nino conditions and ocean trolling in Alaska and British Columbia. The Chief Joseph and Hells Canyon dams block passage to large areas of habitat. Other large dams cause 5% or more mortality (per dam) for smolts descending to the sea and adult salmon returning to spawn. Dams also change water termperatures, reduce flow of rivers, increase nitrogen levels, and allow more predation by squawfish and other predators. The destruction and filling of wetlands and estuaries reduces habitat. Logging increases silt, reduces shade, and disturbs spawning beds. The spread of cities, roads, and other development reduces habitat and increases pollution. Irrigation for agriculture reduces flow of rivers. Unscreened water diversions trap fish in ditches (in 1990, less than 5% of the diversions in Oregon were screened). hatchery fish may increase disease rates and reduce diversity of wild stocks. Grazing livestock harm inland spawning habitat by destroying vegetation and polluting streams.

Out of approximately 1000 native anadromous stocks in Oregon, Washington, and California, 106 are extinct and 314 are at risk of extinction. Currently, hatcheries produce two-thirds of the salmon in the Columbia.

Attempts to improve salmon survival include improved fish passage facilities at dams; streamside buffers in logged areas; barging or trucking of salmon smolts past dams; habitat enhancement; a squawfish bounty to reduce predation; regulation of commerciall and recreational catches; drawdowns of river levels to increase flow speed during smolt outmigration and to promote more natural riverbeds; and improved hatchery practices.

Prepared by Jennifer Gilden and Courtland Smith, Department of Anthropology, Oregon State University, Corvallis OR (541) 737-3858. The research leading to this report is funded by Oregon Sea Grant through NOAA, Office of Sea Grant and Extramural programs, U.S. Department of Commerce under grant no. NA36RG0451 (project no. R/FDF-2). Oregon Sea Grant is based at, and receives funding from, Oregon State University, a Land Grant, Sea Grant, and Space Grant institution funded in part by the Oregon Legislature. The views expressed are those of the authors. This is publication no. ORESU-G-96-004. No permission is required to reproduce this material.

Bycatch

National Marine Fisheries Service, National Oceanic and Atmospheric Administration, June 1997

Bycatch . . . the word conjures an image of immense carnage and great waste of valuable fishcries resources. Graphic news photos show nets and traps twisted around the corpses of dolphins, seals, and sea birds, with abandoned gear migrating across the sea floor to decimate generations of crabs and fish. In truth, bycatch sometimes contributes to overfishing, and many tons of fish are discarded in U.S. fisheries. But portrayals of bycatch are often misleading.

What is meant by "bycatch"

The public currently hears a great deal about bycatch, although it is not a new issue—the Bible mentions throwing away unwanted fish as the catch is sorted from fishermen's nets. But bycatch today is a concern of international proportions affecting every major fishing nation. This concern has led to strong measures by NOAA's National Marine Fisheries Service, the U.S. Congress, and the United Nations to reduce fisheries bycatch.

There is no universally accepted defintion of the term "bycatch." Very broadly, of course, it is regarded as unintended fisheries catch. The newly reauthorized Magnuson-Stevens Fishery Conservation and Management Act defines bycatch as "fish which are harvested in a fishery but which are not sold or kept for personal use, and includes economic discards and regulatory discards." The Act specifically excludes fish that are released alive under recreational catch-and-release programs. Bycatch problems are both global and national. An overview is found in the 1994 United Nations Food and Agriculture Organization (FAO) paper "A Global Assessment of Fisheries Bycatch and Discards."

World Bycatch

FAO couservatively estimates annual worldwide commercial fisheries discards at 27 million metric tons (mt), with about 77 million mt of catch landed. Thus, about one-quarter of the catch may be discarded. This does not include recreational and subsistence discards or discards in many mollusk fisheries, which would substantially increase the estimates.

The global bycatch of protected species is also substantial. The International Whaling Commission estimates that 65,000 to 80,000 marine mammals still perish as bycatch each year. Purse seine fisheries for yellowfin tuna in the Eastern Tropical Pacific (ETP) killed hundreds of thousands of dolphins annually until the 1990s, when such deaths decreased to less than 4,000 each year, due to industry efforts. FAO reports 40,000 sea turtles killed annually in global longline fisheries, and additional turtle deaths occur in other gear. Sea bird capture is another growing concern, especially for some albatross and petrel species ill longline fisheries.

U.S. Bycatch

The highest U.S. ratios of discarded-to-retained catch are in Southeast shrimp trawl fisheries, although this bycatch is steadily declining. However, ratios do not adequately measure the impact on bycatch species: heavy shrimping bycatch of some fish species, such as red snapper, may seriously diminish these stocks, yet not be a problem for other species, such as spot. Conservation problems also occur elsewhere, such as New England, where yellowtail flounder are so severely depleted that their take as bycatch seriously impedes the stock's recovery.

North Pacific groundfish fisheries have America's largest volume of bycatch, although it is just a small percent of the huge harvest. They also face complex allocation problems when bycatch limits on "prohibited species catches" (crab, salmon, and halibut) are reached. The resulting closure of the target fishery sometimes means that groundfish quotas worth millions of dollars remain uncaught.

Recreational fishing, too, can result in heavy discarding. In the Southeast, for example, more than 50 percent of the recreational catch is released because of voluntary "catch-and-release" practices or as a result of bag or size limits. But little is known about the survival rates for many discarded recreational species.

Protected species bycatch is another serious national concern. The National Academy of Sciences estimates that in the 1980s, southeastern shrimp trawling may have resulted in up to 55,000 sea turtle drownings each year. The required use of turtle excluder devices (TEDs) has reduced this mortality significantly. Although ETP dolphin takes have been cut dramatically, harbor porpoise are still killed in Gulf of Maine gillnets, and beaked whales sometimes perish in Atlantic swordfish drift gillnets. However, it is important to remember that most fisheries do not take substantial numbers of protected species.

Of course, not all animals that encounter fishing gear are killed or discarded. Some gear (such as pots and traps) and species (such as some crabs and lobsters) may allow for returning unwanted catch to the sea in good condition.

Why is reducing bycatch difficult?

There are many obstacles to effective bycatch control.

Knowledge gaps. Scientific information is often poor, especially on the magnitude of discards and unobserved mortality; animals' ability to escape fishing gear; economic and social impacts of bycatch; effects of regulations on target and nontarget species; and the ecological consequences of both discarding and full utilization.

Feasibility. Some proposed innovactions and incentives may be too difficult or costly to implement. Market-driven measures, or those depending on individual accountability, may require changes in applicable statutes. And conflicting state and federal fishery regulations may impede bycatch reduction.

Failure to use selective gear. Many fishing operations are financially marginal and unable to invest in more selective gear or fishing practices. They may also simply be unaware of innovations in other countries or fisheries. Or gear experts may not be available to demonstrate or fine-tune new gear.

Interactions between fisheries. Measures to control a fishery's bycatch frequently have both anticipated and unanticipated effects on other fisheries. For example, vessels that have reached their bycatch "cap" often shift operations to other areas and target species, altering bycatch patterns there. Time or area closures, gear restrictions, and other measures can have similar impacts and sometimes, what solves one bycatch problem creates another, as when modifying tuna fishing practices to avoid catching dolphins results in increased bycatch of immature tuna and other species.

Even with selective fishing gear and practices and progressive regulations, some level of bycatch is going to be unavoidable. This is especially true when the target and bycatch species are similar sizes, school together, and have similar responses to fishing gear.

What does the future hold?
While effective conservation gear is a major element of reducing bycatch. American and foreign fisheries are also implementing many other measures to reduce bycatch.

Area and seasonal closures are common, the devastating use of explosives on reefs is being prohibited, and fishermen are being trained in new fishing practices. Industry and netmakers are working closely with govermnents to understand how the swimming behavior of bycatch species can be channeled to avoid capturing them. And where protected species are present, vessel crews are being taught to resuscitate and release captured sea turtles and other animals.

But it is important to remember, reflecting the Magnuson-Stevens Act goal of minimizing bycatch to the extent practicable, that there will always be some bycatch in fishing activities.

Perhaps most encouragingly, there is a growing global commitment to reducing bycatch. Cooperative industry-government efforts are increasing, permitting rapid integration of new products and timely information into fishing operations. The National Marine Fisheries Service and its parent organization, the National Oceanic and Atmospheric Administration, believe these partnerships are the key to improved bycatch management.

The Dangers of Generalizations
Though trawl fisheries account for more bycatch than other gear types, bycatch also occurs with gillnets,
longlines, purse seines, trolls, pots, dredges, sportfishing tackle, and all other gear. Generalizing about any one gear type is dangerous, however, because of great variability in gear conformation, fishing practices, geographic area, season, time of day, crew expertise, and other factors.

One of the most highly publicized bycatch controversies did not involve trawling at all, but concerned the high-seas driftnet fisheries for salmon and squid. FAO notes that bycatch rates and types differed dramatically among the few nations using this gear, with Japanese driftnets having a much greater bycatch of salmon, marine mammals, sea birds, and turtles than did the more numerous Korean and Taiwanese nets. But they were all perceived as jeopardizing the ocean ecosystem, and all use of these huge nets has now been banned by the United Nations.

Bycatch Success Stories

Southwest
Bycatch of dolphins in the eastern tropical Pacific Ocean decreased from over 120,000 in 1986 to less than 2,600 in 1996. This decrease has been achieved through the remarkable efforts of fishermen and the Inter-American Tropical Tuna Commission's International Dolphin Conservation Program. Fishing practices most dangerous to dolphins have been eliminated, and methods of releasing dolphins have continually been improved.

Southeast
Government and industry have implemented a cooperative research program to reduce finfish bycatch in Gulf of Mexico and South Atlantic shrimp fisheries. The program has led to a real understanding of how shrimp trawls affect finfish stocks, and has resulted in very effective bycatch-reduction devices for these fisheries. The region also has a highly regarded technology transfer program for TEDs.

North Pacific
In the North Pacific, industry's desire to improve survival of halibut bycatch led to methods to safely and quickly release this species. Another industry innovaction electroncially transmits observer data from the groundfish fleet to a private contractor for "real-time" analysis, then transmits the information to the vessels so they can avoid crab, halibut, and salmon "hot spots."

Northeast
In the Northeast, the "Nordmore grate" finfish excluder device for shrimp nets has proven its worth to the industry by reducing costly shipboard sorting. In addition, scientists and harvesters are jointly testing the effectiveness of gillnet "pingers" — electronic devices that emit beeper-like sounds to warn harbor porpoises of the nets' proximity.

Waves from the Past: Why Idaho suffers poor fish runs now

Biologist Survey 1940

In the year 1940 and in the month of September a group of people made up of Biologists, Gillnetters and interested people of both Oregon and Washington who were concerned about the future of the salmon and steelhead, decided to make a survey of fisheries conditions and problems in the Columbia River drainage system. They formed a motor caravan and proceeded up the Columbia River. They were led by Lloyd A. Royal, Chief Biologist for Washington Dept. of Fisheries, Milo Bell, Engineer, and Dr. Chapman, Assistant Biologist. Their trip took them about a week's time. The following is part of the report as they crossed into the State of Idaho and after reading this type of report, how can anyone feel sorry for the people of Idaho.

Idaho was asked over 30 years ago to join a tri-state compact to help regulate fishcries, but they chose to ignore us because they wanted dams, not fish. Now the worm has turned and the sportsmen want to get into the compact so they can have a word in setting our seasons to benefit themselves. Idaho had better decide soon - Fish or Dams.

Day by Day Report, Sept., 1940 "The next stop was over the line in the state of Idaho at the Weyerhaeuser Lumber Co. and the Washington Water Power Co. dam on the Clearwater river in Lewiston. Here the originally installed fish ladder was dry in the late summer so another ladder was built into the power house proper, in which channel flows the river in late summer. Plenty of water was allowed for this ladder throughout the year. Many of the early runs of Columbia Chinook used to spawn on the Clearwater, the Salmon River, and the Payette tributaries to the Snake in Idaho. Dams with poor or no fishways over them have depleted even the remaining salmon runs and, as the former heavy runs of blueback salmon to Payette Lake, they have killed some fish runs off completely.

Some salmon still can ascend the Clearwater and Salmon River, but the 180 miles of the upper Payette, some of the finest spawning area in the Columbia system is completely cut off by the United States Bureau of Reclamation's Black Canyon ir-

rigation and power dam on the lower river. It is this dam, without a single fishway, that is responsible for killing off the hordes of blueback that once ran to Payette Lake.

At Cascade, between Payette Lake and the Black Canyon, a second low power dam completely crosses the river with not one fish ladder over it.

On the way to Boise many irrigation canals were noted, but not a screen of any type was found in any one of them to prevent fish from going out into the fields. This was found to be the same of diversions elsewhere throughout the state of Idaho.

At Swan Falls on the Snake River a power dam crosses the Snake and until comparatively recently no complete fish ladder was provided. This dam, originally built in 1901 and added to in 1912 and in 1925, had an incomplete fish ladder until June of this year, 1940. Up until last June the last two steps of this ladder, steep as it was, were completely missing. Three complete cycles of salmon have been lost by this lack of correct fishways up over the Swan Falls Dam alone. Even when the present ladder was added to the dam, it was built so steep that only a few steelheads might possibly make their way over it. Also, on both sides of the dam were great blind eddies where fish milled around until they died.

The Boise River is all used up for irrigation so it is now a dead stream as far as salmon are concerned. It, too, could have been saved for spawning with a minor part of its water reserved for keeping the fishways going through the dry months.

The Weiser River has much fine spawning area on its beds of small gravel and could always be a heavy producer of salmon if it is kept open to fish travel."

Kenai fish plant closes Wards Cove also shuts Port Bailey

By T.A. BADGER
Daily News reporter

After four decades of processing fish in Kenai, Wards Cove Packing Co. is shutting down its operation there because of poor red salmon returns and tighter fishing restrictions in Cook Inlet in recent years, the company's president announced Tuesday.

Alec Brindle, who heads the Seattle-based Wards Cove, said the company was also closing its pink salmon processing plant at Port Bailey, on the north side of Kodiak Island. He said given the low price for pinks, it wasn't economical to process them.

Closing the plants has made sense for the past few years, Brindle said, but the company's long history in both areas made it harder to make the decision.

"It's one we should have made a few years ago," he said. "We kept hoping things would get better, but eventually reality overcame hope."

Forecasts that call for continued small red salmon runs in Cook Inlet and depressed pink salmon prices helped Wards Cove make up its mind, Brindle said.

The Kenai and Port Bailey plants each employ fewer than 15 people year-round,
with that number rising ten-fold or more during the summer season, said Neal Fried,
a state labor economist.

Wards Cove is one of the state's largest fish processors, with estimated annual sales of $100 million. The company has plants in Bristol Bay, Southeast, Seward and at Alitak, on Kodiak's southern coast that will not be affected by the closures at Kenai and Port Bailey, Brindle said.

Tuesday's announcement creates an uncertain future for the 85 to 100 boats and dozens of setnetters that sold salmon to Wards Cove's Kenai facility.

"There's going to be hardships, and possibly significant hardships for some people," said Bill Sullivan of Kenai, a driftnetter who has fished for Wards Cove for 22 years. "I don't think everybody will make a soft landing."

Gunnar Knapp, a fisheries economist at the University of Alaska Anchorage, said Wards Cove's Inlet fishermen will have to find new places to sell their catches. That may mean traveling longer distances to reach a willing buyer, which would likely eat into their already scant profits, he said.

Wards Cove's departure from Kenai leaves a couple of major processors still oeprating in the area, along with a half-dozen smaller outfits.

Knapp said Wards Cove's decision may indicate further decline in the number of processing facilities in the coming years, given the difficulties faced by the state's commercial salmon industry — among them, weak runs, increased competition from foreign farmed salmon and Japan's prolonged economic malaise.

"It wouldn't surprise me by any means to hear about more closures in this area or elsewhere," he said. "When you think of the kind of run we had in Cook Inlet ... anybody rationally looking ahead would have to weigh the possibilities of how many more years will be like that."

State fisheries managers kept commercial fishermen on the beach for two weeks during the run's peak to ensure that the Kenai River reached its minimum escapement of spawning fish. As a result, the commercial catch, originally forecast at about 2.5 million fish, was fewer than 1 million.

Paul Dale, a co-owner of Snug Harbor Seafoods in Kenai, said the processing industry is undergoing big changes, and that to succeed, companies will have to figure out how to adapt.

"I hope folks don't interpret (the Kenai closure) as an industry statement on the viability of the Cook Inlet salmon fishery," Dale said. "There certainly are a number of companies in Cook Inlet that remain optimistic about the salmon business in Alaska."

Dan Foley, owner of Pacific Star Seafoods in Kenai, said Wards Cove and other large companies have a different perspective from smaller processors with only a single plant to manage.

"They have choices," Foley said, "If it looks like it's better from a corporate standpoint, they can invest in Bristol Bay or Southeast or Kodiak.

"I don't have choices. I either operate or I don't operate. That's my choice."

Reporter T.A. Badger can be reached at tbadger@adn.com.

Pacific Marine Conservation Council

The Pacific Marine Conservation Council (PMCC) begun in 1997, is a public benefit, non-profit corporation with offices located in Astoria, Oregon. The organization's Board of Directors includes sport and commercial fishermen and women, marine scientists and others scattered along west coast ports from Santa Barbara, CA, to Seattle, WA. A staff of four carries the day-to-day work load.

PMCC is determined to match local fisherman knowledge with scientific analysis and research. This information will lead to short and long term changes in West Coast groundfish management practices that will, in turn, sustain both ocean fisheries and local coastal economies.

As of the first of the year, the PMCC office is fully staffed, all the desks are in place and the computers are humming. Here is the staff rundown.

Bob Eaton, Executive Director was hired from among 100 applicants in August 97. He brings a wealth of experience and contacts. He was the ED of another fish oriented group, Salmon For All, for almost ten years. He has also been ED for two Chambers of Commerce, a Parks & Recreation Department, and currently is a commissioner for the Port of Astoria. Eaton says, "I have been helping groups meet their goals for 25 years." Eaton has lived in Astoria for nearly 11 years. With his hiring, the PMCC board selected Astoria as its headquarters. Eaton procured office space from Port of Astoria property adjacent to the Red Lion Motel. The Columbia River waterfront office features lots of windows and plenty of elbow room.

Executive Director attends leaders conference

Bob Eaton recently attended a three day national conservation conference in New York City, where he had been asked to provide the overview for the West Coast. Not only did he report having a great time, but was able to make many new contacts and renew some old ones. The 25 conference attendees represented groups from across the nation including Hawaii, Alaska and the Caribbean. Says Eaton "It was a humbling experience just to be invited let alone being asked to give a report."

Donations

contined from page 2

Randi Olsen-Centralia, WA
Russel Falluer-Astoria
Salmon Habitat Restoration (John Sprague)
Clarence Dryer-Astoria
Robert Everard-Warrenton, OR
Attnys Campbell, Moberg, Cannessa Faber& Hooley-Seaside
Tom & Kathy Gibbs-McCleary, WA
Stack Betro Zoff-Raymond, WA
George Sirno-Salem, OR
Dorothy, Shannon-Hammond, OR
Ed & Dorothy Ericksen-Portland, OR
Viola Abrahamson-Seaside, OR
Perry Nordmark-Seaside, OR
Astoria Hurricane Enterprises-Astoria, OR
Ray & Bea VanDiver-Corvallis, OR
George Anderson-Hillsboro, OR
Cliff M. Johnson-Astoria, OR
Don & Grace Goodall-Dunedin, FL
Cliff E. Crandall-Tigard, OR
JD Todd & Lucy-Roseburg, OR
Berger Rorvick & Kathleen Kullard-Sequim
Carl & Pat Bartuff-Portland, OR
Ike Vice-Astoria
Herb Johnson-Salem, OR
Clinton Renney-Tuson, AZ
Shirley Richards-Portland
Henry & Audrey Coles-Portland, OR
Harold Nelson-Portland, OR
Clarence Demase-Astoria
Ellen Washburn-Front Royal, VA
Ward & Doris Paldanius-Salem
Ester Norlund-Hoquiam, WA

LETTER ONE *(contines from cover)*
Ilwaco Charter Association
P O Box 268
Ilwaco, WA 98624

July 30, 1998 [presented at Portland meet. Ed.]

Columbia River Compact

Please accept this written testimony on behalf of the Ilwaco Charter Association. Due to the fact this time of year we are unable to be there in person. I believe Steve Watrous or Larry Swanson will read this on our behalf on the record.

The Ilwaco Charter Association is against the 12 hour August 4th gillnet season for Sturgeon. We have several points why we cannot support this proposed season.

Fact l: The reason that the Buoy 10 sport season cannot open August 1 is because of Chinooks low numbers. In 1997 the gillnets took 300 to 400 counted chinook in a 6 hour period, so it would be safe to assume in a 12 hour period the gillnets could take 600 to 800 chinook. This is about the savings in delaying the Buoy 10 opener a week. Remember in both the Wild Salmonoid Policy and in the North of Falcon Process the sport fisheries get priority of Chinook and CoHo. Maybe we better open Buoy 10 on August 1.

Fact 2: The 1997 August 4th gillnet season was a complete flop. There are many reasons why this happened, but the main reason the Compact gave the gillnetters the August 4th season in 1997 was economics feeling the gillnetters would receive a higher price. Compact members it had the opposite effect. If you think about it for a minute the only people that made or will make money is the fish buyer and the retailer. When you have only a 6 or 12 hour season and it

being 2 to 3 weeks until the next gillnet opener the fishermen are at the mercy of the buyers and processors and can never get a good price. The Columbia River gillnetters have had 100 years to market sturgeon and have failed miserably. Case in point in California farmed sturgeon sell for about $4.75 a pound, the treaty fishermen on the Chehalis river get $3.25 to $3.75 a pound, yet on the Columbia river gillnetters get between .50 to $1.00 a pound for white sturgeon. This is a miss use of a valuable resource.

The Ilwaco Charter Association is 100% against a lower river Aug. 4th gillnet season even though it is hidden at night there is still a gear conflict. We feel the gillnetters can still obtain their quota with their Sept. Oct. and Jan. seasons and doesn't need the August 4th opener. This is why the Ilwaco Charter Association does not support a lower river August 4th opener, but we are open to a compromise. The compromise would be a Tounge Point to Longview 12 hour opener. This would keep the Chinook catch down to a minimum and that is the goal of both the states and the Columbia river tribes. This would also minimize any conflicts between user groups.

Thank You for your time.
Sincerely
Butch Smith
Pres. Ilwaco Charter Assoc.
cc: Dr. Don Mclsaac
Bernie Born
Steve King
Larry Peck
Bruce Crawford
Phil Anderson
Lisa Pelly
Steve Watrous
Larry Swanson
Jim Lone
Al Thomas

Maritime Museum

Preserving Your Past

The Columbia River Maritime Museum has embarked on a project to preserve and share 6,000 historic photographs from the Columbia River Packers Association, Bumble Bee Seafood, and Union Fish archives. With over 6,000 images of fishing and canning on the Lower Columbia, these collections will serve as an invaluable resource to researchers, Museum visitors, descendants of fishermen, cannery workers and boat builders, and the world at large.

New technology will allow the Museum to create a "digital photo album" which can easily be accessed from any computer in the world. To perform this project, the Museum is working to raise funds for a photonegative developer and a professional archivist to convert the negatives to computer images.

To find out more about the project and the photos involved, or if you would like to make a gift to support this effort, call Rob Rudd at the Museum at (503) 325-2323.

LETTER TWO
Tiki Charters
352 Industry Drive
Astoria, Oregon 97103
Tel. (503) 325-7818

July 21, 1998
Free Willy Bait & Tackle Charters
P O Box 187
Hammond, OR 97146
503-861-1201

7/21/98

Columbia River Compact

Please consider the gillnet 12 hour season for Sturgeon to not be allowed on Aug. 4th - the lower Columbia River.

We own and operate Free Willy Charters, and Rogers Marine Repair in Hammond, our business is sports and charter fishing. This season could be a great threat to our livelihood and the danger these nets cause to our fish and sport boats. Last year season only cause great amounts of dead and dying sturgeon washing up on our beach's and docks, and a net found near Ilwaco full of dead and dying Sturgeon. I am against this proposal.

Please help our sports fishermen and our business on the lower Columbia River to have some kind of fishing. We cannot plan vacations and charter trips around our changing Salmon season and regulations. Please don't allow them to take away the rest of our resources.

Thanks for hearing us.

Patricia Rogers
David Rogers

LETTER THREE
State of Oregon
Department of Fish and Game

Re: 8/4/98 Gillnet Season

It is my understanding that your department has proposed an August 4, 12 hour gillnet season from Buoy 10 to Longview. I was under the impression that the reason for a late Buoy 10 fisheries was to let some Chinook Salmon escape. It is the opinion of the sport fisherman and charter owners like myself that this is a disaster looking for a place to happen.

Last year is a prime example. During a 6 hour time period it was estimated that 300 -400 salmon were caught in the nets with the sturgeon. It is not possible for the gillnetts to distinguish between sturgeon and salmon. During a 12 hour season you can expect 600-800 salmon to be caught. This at a time when millions of dollars are being poured into trying to bring back the great runs of salmon that once populated the Columbia River. This type of mis-management is what will put the salmon on the endangered list.

Sport fishermen are some of the greatest proponents of conservation and salmon re-population. Charter businesses like mine make our living from the fishing industry and with few exceptions adhere strictly to rules and regulations concerning size and catch and release. We become very frustrated when such waste such as the partial net that was found on the Washington side last year full of dead fish and the dead sturgeon that were found on the fuel dock in Astoria. We notified your department at the time and were told that there was nothing you could to do and to call the police - which we did.

It seems to me that a more prudent thing to do would be to open the gillnet season above Tongue Point to decrease the salmon catch. A buoy 10 season will only pit the sportsmen and the gillnetters against each other. We already have enough of that.
Thanks for listening, Richard Olson

Waves from the Past…

Sport Fisherman on the Willamette river circa 1907

Martin Alvey

Waves From The Past

Strange Story: Was it Amnesia, or the Bottle

By Eldon Korpela

Each night of gillnetting salmon on the lower Columbia during the busy August season was an adventure, but a few hang in one's memory forever. To fishermen operating alone, the lack of verification by a witness, often makes some incidents seem unbelievable to one's cohorts.

One pond-like August morning during the early sixties, I had just finished picking up my net near the fourteen buoy. There was still a couple of hours to daybreak and as I looked westward I didn't observe any boat lights between my position and the mile or so to the Columbia River bar. I always had a feelling of relief to have my net safely in the boat, especially with an outgoing tide in such a potentially dangerous area.

As I proceeded upriver toward the Desdemona Light another bowpicking gillnet boat, with bright lights beaming on the still water, appeared off my starboard bow. It soon became obvious that things were not normal. The boat's engine was running, thirty fathoms of net remained in the water, but the operator was not visible. This was in an area where one should be actively working to get his net back into the boat, especially with the ebb tide beginning to peak.

I maneuvered my bowpicker's stern to the other vessel's stern so I could yell into the other boat's open cabin doorway. There was no response. I was convinced that the operator had fallen overboard so my plan was to get the remaining net aboard, tow the vessel to Astoria's West End basin, and notify the authorities.

I tied the two sterns together and climbed aboard to check the cabin. Astonishment quickly turned to relief when I observed the fisherman asleep in his bunk. My hand shaking his shoulder awakened the snoozing skipper. His explanation for this unusual predicament was that his net had caught a solid snag. He decided it would be better to wait for daylight or slack tide rather than tear the net. "Thought I'd have a little drink and wait" he murmured.

I climbed aboard my vessel and slowly headed toward Astoria while glancing back at the boat to be sure the skipper had oriented himself. He was obviously disoriented, because after picking his net, he was headed into the breakers inside buoy fourteen.
I quickly did a one-eighty and opened the throttle to reach him before he hit the shallows.

Fortunately he was proceeding at a slower speed and upon overtaking him I switched on my bright mast light and shouted, "Follow me." Follow me he did, but his bow was only about ten feet from my stern and even when I opened my throttle the distance did not change. This is not real, was my first reaction. This cannot continue, was my second. I switched off all my boat lights and did a "ninety" to the port.

Having lost me he again steered toward the same dreaded breakers, but at a slower speed. There wasn't any other choice but to intercept him again, turn on all my lights and induce him to steer toward the lights of Astoria.

Same scenario, so lights off again, right angle move to again shake off my obstinate "sterngater." This time, however, he did steer upriver toward the ship channel which would lead him to Astoria.

I approached this same fellow on the netracks the following afternoon and asked him how his previous fishing night had been. When he merely said, "OK", I knew instantly that he did not have the slightest recollection of the previous morning's incidents.

Just another strange night in the many that I have had gillnetting the lower Columbia during the August salmon season.

TIDAL WAVE HITS MAINE SEA HARBOR— Jan 10 1926

Haven for Ships at Village of Bernard Suddenly Emptied by Phenomenon!
50 BOATS HURLED!
Many Narrow Escapes From Plunging Ice Cakes; Rumbling Heard First!

SOUTHWEST HARBOR, Me. Jan. 9, 1926 (AP) — The inhabitants of the little village of Bernard, three miles from here, experienced their first tidal wave today. Unexpected in its origin, the phenomenon which occurred about noon caused the sudden emptying of Bass Harbor followed a few minutes later by a 10 foot rush of water and then two smaller waves. No one was injured but about 50 fishing boats were hurled ashore and two men in a dory had a narrow escape from falling cakes of ice when their craft suddenly grounded.

The first sign of something wrong was a rumbling from the direction of the harbor. Townspeople ran to the piers to see their harbor emptied with a rush.

William Qelly, who has a fish packing plant on the eastern shore of the harbor, told what happened next.

At Low Tide.

"It was about low tide when the first wave came," he said. "It flowed in steadily like the even flow of a river. Then came two lesser ones, and in less than ten minutes the whole harbor was filled to near high water mark. Great whirlpools were formed. Small boats were tossed about at their moorings and the 70 foot fishing smack Fish Hawk broke from her lines at the Underwood dock and crashed against the pilings. The entire harbor was a mass of foam.

"The water left the harbor so rapidly that a waterfall was created at the harbor mouth. In less than 15 minutes it was all over."

Ice Cakes Tumble. The chief menace to the fishermen was the tumbling of the ice cakes to the bottom of the harbor. Chester Sawyer and Forest Albee were anchored in their dory near Parkers wharf when the water was sucked from beneath them and the dory went aground. They ran for shore, dodging the crashing ice cakes.

No other body of water in this region was affected by the phenomenon, but in Vinal Haven, an island in Peobscot [sic] Bay 25 miles southwest of here, rumbling noises were heard four or five hours before the Bass Harbor disturbance and an hour before these islanders felt what they thought were slight earthquake shocks. A fisherman reported seeing a ten inch ripple on the waves, although the sea was calf [sic], and he said the water was roily and peculiar in appearance. A steamer captain said the occurrence at Bernard was probably what natives call a "bore" wave, peculiar to coves and harbors of a certain shape. He recalled that he was nearly shipwrecked in a "bore" wave a few years ago.

Benson Cigar Log Raft leaving Wallace Slough 10 miles below Longview, Wash., on the way to San Diego in 1916. John Fastabend-2nd frightr is the designer of the reft and cradle.

Waves From The Past

The Wreck of the Silva de Grace

The wreck of the Silva de Grace resides on the bottom of the Columbia River about 200 yards east of the old Bumble Bee Cold Storage, which is now Crest Seafood. The red buoy marks the spot where a lot of sturgeon sport fishermen anchor. This happened around the turn of the century.

"In Days of Old, in Days of Gold, in Days of '49" — Then Was When the Silva de Grace Stranded

In Astoria's upper harbor, now rapidly filling up, there is a reef of rock known as the Silva De Grace, just abreast of buoy No. 4. In days of old the main channel of the river flowed past this reef, and all up-river bound shipping passed by it and close in shore up to and around Tongue Point. It was rated as very dangerous to navigation, and a number of years ago the government did considerable work there removing the reef. Since that time the main ship channel has shifted to the north and west, until it now lies due northeast from the union Pacific dock.

But this story is about the wreck of the silva De Grace, which occurred on this rock, and which gave it its present name.

In 'the days of old, the days of gold, the days of '49," there came a man named Gray with that vessel up from California. It was sometime in July or August, and he beat up the river as far as he could get and ransacked the country for lumber, buying every foot he could find, at from $12 to $15 per thousand. He bought as far as Salem, and had the lumber hauled to the vessel; then warped and worked her down, loading at every place possible, until he had nearly a million feet aboard.

His heart was glad with high hopes of great fortune, for lumber was selling at $350 a thousand in San Francisco, and the cargo of the Silva De Grace was worth to him $350,000 in San Francisco harbor.

Day and night he worked, and one pleasant afternoon in September '49 he got the vessel round Tongue Point, when standing too far to the south of the channel, she ran on a sort of forked rock, and no amount of effort could get her forward or back. Gray was almost frantic. Every day's delay made it all the more probably [sic] that some kind of a sawmill would be rigged up in the harbor of Yerba Buena, now San Francisco, and the golden visions of selling a million feet of lumber at $350 a thousand fast disappeared, as he found the unfortunate Silva De Grace fast on the fatal rock.

Three days after there came an American ship from the Sandwich islands, which had sailed from Boston with a cargo for that place and was now under orders to return by the Columbia river with what freight could be there procured.

To the captain went Gray and offered him $10,000 as a gift to himself and $75 a thousand to load the lumber from the wreck of the Silva De Grace and carry it to San Francisco.

The captain refused, and Gray offered him $15,000, $20,000, $25,000, but to no avail, the captain remaining obdurate and declaring were he to lose his vessel in the attempt, he could never look the owners in the face after disobeying their orders.

In those days vessels in the Columbia were like angel visits — few and far between. That season a brig, and a little later a schooner, put in here and took part of Gray's cargo to San Francisco. The rest stayed until it was no longer profitable to move it, and the Silva De Grace, which was built of live oak and as sound as a dollar, was cut down to her bulwarks, the stubby edges showing up black and grim at every low tide for years, until the government engineers blasted out what was left of her when they were removing the reef.

Juvenile Fish Bypass System Improvements

The juvenile fish bypass systems in place today were designed based on observed juvenile fish behavior at the dams. Turbine operation creates currents that juvenile fish follow toward turbine intakes. The bypass systems employ large diversion screens which extend in front of the turbine intakes to intercept the fish and guide them upward into the dam gatewells. The fish then go through openings in the gatewells into bypass channels, and either re-enter the river below the dam, or are routed to raceways for loading on barges or trucks, to be transported downriver.

The diversions screens guide a good percentage of the fish, but some will swim under the screens and through the turbines. About 60 to 70 percent of spring/summer chinook salmon are guided by the screens, up to 90 percent of steelhead, and about 30 to 40 percent of fall chinook salmon are guided.

Research has indicated that the "fish guidance efficiency" of the 20-foot screens originally designed for these systems could be improved by replacement with longer screens. The new screens can increase the percentage of fish guided by 10 to 20 percent over the shorter screen guidance rates. Extended 40-foot screens have been installed in the juvenile fish bypass systems at Lower Granite, Little Goose and McNary dams as called for in the NMFS Biological Opinion.

The longer screens have been tested at John Day Dam. However, a regional Independent Scientific Advisory Board has recommended that other strategies be explored at John Day Dam to improve salmon passage, such as continued spill alternatives and surface bypass system study. The Corps and the region are considering whether to pursue further efforts on development of extended screens at the dam.

Spillway Flow Deflectors
Since the early 1980s, intentional spill at the dams has been employed as another means to get juvenile fish past the dams. Water that might normally be sent through the turbines to create electricity is released through the dam spillway instead, carrying the fish with it. The Biological Opinion calls for increased spill for fish to ensure that a sufficient percentage of the fish are diverted away from the turbines.

High amounts of spill, however, can cause dissolved gas supersaturation and levels of total dissolved gas in the river that are harmful for fish. To reduce the amount of gas entrained during spill, spillway flow deflectors have been installed in the stilling basins below the dams to interrupt the downward plunge of spilled water and direct it in a more horizontal flow. Flow deflectors are now in place at seven of the eight lower Columbia and Snake river dams. The most recent installations were at Ice Harbor and John Day dams in 1997-98. The Dalles Dam does not have deflectors—it has a shallower stilling basin which allows higher spill levels with lower gas production.

Waves from the Past

Pictured are two Bristol Bay gillnet sailing boats. The one in the middle is loaded down with red salmon. The fish are all in the stern and a net full. This picture was taken on the fishing grounds in Bristol Bay in 1948. The white stripe around the boats indicate they fish for the Bumble Bee cannery. A fish launch is towing them in to the cannery as the boats then only had sail for power. Both fishermen in the middle boat are from Puget Island near Longview, Washington. In the stern is Max Holland and in the middle is John Carlson who was nicknamed "Peppermint John."

Scientists say Alaska salmon declines inevitable

Online interviews with scientists available at www.uaf.edu/seagrant Click "Hot Topics."

FAIRBANKS, Alaska—For two straight years, returns of sockeye salmon to Bristol Bay, the world's largest wild red salmon fishery, have been below state forecasts. Salmon returns to the Kenai Peninsula, the Yukon-Kuskokwim River and elsewhere in Alaska also have fallen short of expectations.

The declines come as a shock to fishermen and policy makers, but not to some scientists who study the North Pacific Ocean. Their studies of year-to-year and longterm changes in the ocean suggest the salmon declines are in part the result of natural ocean cycles.

"It was bound to happen," says Milo Adkison, an assistant professor of fisheries at the University of Alaska Fairbanks School of Fisheries and Ocean Sciences. "You get large year-to-year variations and you also get shifts in salmon abundance that can run for a couple of decades. Salmon productivity itself is connected to conditions in the ocean that operate on similar time scales."

Adkison says research being done at the University of Alaska Fairbanks suggests the changes in fish and shellfish abundance, called regime shifts,

occur about every 20 years. It's been about that long since Alaska's salmon stocks rebounded from historic lows. Adkison says a regime shift might be underway, but it's still too early to tell.

"Because there is such a large interannual variability, you have a hard time knowing that you're in a new regime until you've seen five years of bad returns in a row or five years of good returns in a row," says Adkison.

UAF assistant professor of oceanography Tom Weingartner also isn't ready to say a regime shift is underway, but he has noticed dramatic changes in the ocean.

"Certainly over the last year we have been influenced by El Nino," says Weingartner. "Whether or not that is occurring in conjunction with a regime shift, I don't know. Our Canadian colleagues noticed in the Gulf of Alaska that nutrients necessary for phytoplankton production were depleted from the surface layer of the ocean. That has not been observed before in the Gulf of Alaska. Another thing that has been noticed is a change in the phytoplankton species composition in the Bering Sea."

Don Schell, the director of UAF's Institute of Marine Science, has been studying bowhead whales to determine how plankton productivity in the ocean is changing. Bowhead whales eat millions of tons of plankton every year, the energy from which is converted to carbon in the whale's baleen. His measurements of plankton carbon in whale baleen indicates that plankton abundance in the Bering Sea has declined significantly during the last 50 years.

"The implication is that the Bering Sea has decreased in productivity by 35 to 40 percent since its peak in 1965 or so," says Schell. "Now a 40 percent decline in the carrying capac-

ity of the ecosystem is going to have profound effects on the top consumers, and I think that is in part what we are seeing now. It implies that there is a bottom-up change occurring."

While scientists know much about changing ocean conditions, predicting such changes far enough in advance to help improve salmon forecasts is still years away. But it is one goal scientists are working toward. Fisheries scientists and oceanographers from throughout the Pacific Rim will meet September 30 to October 3 in Anchorage to exchange research on how to use ecosystem data to better manage fisheries. The conference, Ecosystem Considerations in Fisheries Management, is part of the Lowell Wakefield Fisheries Symposium series sponsored by the Alaska Sea Grant College Program. Several chapters and divisions of the American Fisheries Society are scheduled to hold joint meetings with the ecosystem symposium.

To learn even more about what scientists say about this year's salmon declines, go online at www.uaf. edu/seagrant and click on "Hot Topics." There, you'll find interviews with University of Alaska Fairbanks scientists and links to related sites. You can even make your own prediction for the 1999 salmon season!

The Alaska Sea Grant College Program is a marine research, education and outreach service headquartered at the University of Alaska Fairbanks, School of Fisheries and Ocean Sciences. Sea Grant is funded by the National Oceanic and Atmospheric Administration in partnership with the State of Alaska and private industry.

Alaska Sea Grant press releases and links to other fisheries and oceanographic material can be found on the Internet at http://www.uaf. edu/seagrant

Studies reveal effects of Hanford radiation releases on Columbia River

The radiation in the Columbia also reached the Pacific Ocean, contaminating shellfish along the Washington and Oregon coasts. The levels of zinc-65 in the oysters of Willapa Bay on the Washington coast were monitored beginning in 1959. According to a 1959 Hanford document, the levels of zinc-65 in Pacific oysters were more than 300 times higher than in Japanese or Atlantic coast oysters.

Columbia River fish were contaminated. Ducks and geese that nested or fed along the Columbia became contaminated. Waterfowl also picked up radioactivity from waste ponds on the Hanford site. The contamination levels were higher in birds collected on the Hanford site than in those from the areas surrounding Hanford. In early 1970, several ducks collected from waste ponds near the reactors were found to be very contaminated. If someone had immediately eaten one-half pound of the most contaminated duck, the radiation dose to the bone would have been four times higher than the annual acceptable standard at the time.

People with unique lifestyles may have eaten other kinds of contaminated food. For example, Native Americans ate shoreline roots and berries.

The third source of exposure was from spending time along the shore, swimming or boating downstream from the Hanford reactors. Most of this exposure was in the form of external, whole-body radiation. Some people have recalled that in the 1950s and 1960s, they preferred swimming near Hanford because the water felt warmer there than farther downstream.

Hanford and Columbia River Fish
Hanford scientists began studies on Columbia River fish in 1945. They wanted to learn if the reactor effluent which was discharged to the river had any effect on fish. They constructed a laboratory, at Hanford near the reactors. Young fish were exposed in tanks to various concentrations of effluent, usually at levels much higher than Hanford was releasing to the Columbia River.

There are two kinds of fish in the Columbia River: anadromous and resident. Anadromous fish are those that hatch in fresh water and return there to spawn, but spend most of their lives in the ocean. Some examples of anadromous fish are salmon and steelhead trout. These two types of anadromous fish are the most valuable to the region's economy and to Native Americans.

The early Hanford studies were concerned primarily with young Chinook salmon and steelhead trout. Eggs and young fish were exposed to higher concentrations of effluent than were actually present in the river. Many died. However, Hanford scientists determined that the cause of death was not exposure to the radioactivity. The fish deaths were determined to be due mainly to the chemicals added to pretreat the cooling water and the increase in water temperature. The studies did not examine the long-term effects of exposure in the fish.

When mature anadromous fish return from the ocean to fresh water, they do not feed. Since they are not exposed by eating contaminated smaller fish, they are not thought to accumulate much radioactive contamination. Due to significant public concern, the Dose Reconstruction Project is planning additional work on the radiation levels that were present in anadromous fish as they came up the Columbia to spawn.

Resident fish are those that live their entire lives in fresh water. Examples of resident fish are crappie, bass, river trout, whitefish and sturgeon. Due to spending more time in the contaminated portions of the Columbia River than anadromous fish, the resident fish collected higher concentrations of radioactivity. Most of the radiation in the fish came from eating smaller aquatic creatures such as algae and insects. The algae could concentrate the radiation up to 100,000 times the levels of contamination in the river water.

Resident fish in the Hanford area readily accumulated the radioactive phosphorus in their bodies because the levels of natural phosphate in the river were low. The whitefish had the highest concentrations of phosphorus-32.

Because of this, Hartford researchers selected whitefish as the focus of their fish monitoring efforts.

The Hanford Health lnfornmtion Network has received several questions about the radioactivity levels in sturgeon. The concern is raised because sturgeon feed off the bottom of the river where radioactive sediments are found and because sturgeon can live more than 100 years. Based upon studies conducted by Hanford, scientists concluded that eating sturgeon would have given a lower dose than eating crappie, perch or bass. This lower exposure was due to lower concentrations of radioactivity in the sturgeon and people catching fewer sturgeon than other fish. However, a scenario of a person eating large quantities of sturgeon is entirely reasonable and this diet could have resulted in a higher exposure.

Official Concerns in the Past
Did Hanford pose a danger to the fish and to people who ate fish? The historical record is not consistent. Based on the laboratory studies and the monitoring of the river, Hanford scientists and government officials concluded that "the effluents were diluted to relatively safe levels: based on standards at the time." However, some health officials in the past expressed serious concern about the contamination levels in the Columbia River.

During Hanford's early years, Herbert M. Parker was in charge of the health and safety programs. In 1954, as he considered the projected increases in radiation being released into the Columbia from the reactors, Parker suggested that it might be necessary to impose a public fishing ban from just above Hanford (Priest Rapids) downriver to McNary Dam. Parker noted that the "public relations impact would be severe." According to a report by the Hanford Education Action League, a nonprofit organization based in Spokane, Wash., "Although no

fishing ban was ever imposed, the radiation levels in Columbia River fish surpassed the point at which Parker had considered a fishing ban during the years 1957, 1958, 1960, 1961, 1963 and 1964."

Nor was concern focused only on the section of the Columbia nearest to Hanford. In 1964, the U.S. Public Health Service recommended that immediate action be taken to cut in half the radioactivity levels in "the Lower Columbia River." although not specified in this report, the Lower Columbia was usually referred to as downriver from McNary Dam to below Portland.

Current Concerns
Many people have expressed concerns about the radioactive materials from past releases that are trapped behind Columbia River dams, especially McNary. However, a Washington Department of Health report has concluded that the risk for adverse health effects is less than that associated with federal and state drinking water standards. This could change if the sediments were dredged (although this is unlikely).

Canada and Washington to Share Sockeye Salmon Catch

British Columbia, Canada and Washington State announced an agreement on sockeye salmon that would double the share American fishermen took in 1997 when there was no agreement with Canada.

The one-year deal marked a significant political step in sharing salmon stocks in the hotly contested waters between British Columbia and the United States, but it did little to confirm a long-term arrangement to replace the lapsed Pacific Salmon Treaty.

Federal Fisheries Minister David Anderson hailed the agreement — the second with Washington state in a week — as a means of bringing order to disputed waters.

"In terms of getting stability, in terms of our people getting some certainty, this is a very good deal," Anderson said at a news conference.

"An unlimited fishery by the Americans simply means we will not achieve our conservation goals."

Thousands of British Columbia fishermen rely on Fraser sockeye.

"It's the most valuable pricewise," said Paul Kandt, a third-generation fisherman. "It's our bread and butter — the sockeye in the Fraser. It's 90 percent of my income."
Last year, sockeye had a wholesale value of $207 million in Canadian dollars, compared with $43.8 million for pink and $34.8 million for chum.

Sockeye in the Fraser is likely to be even more critical this year because of low projected returns in northern British Columbia rivers.

For U.S. fishers, the deal means access to about 1.2 million sockeye of a total allowable catch of 4.9 million. In the past, Washington catches have ranged from 12.5 percent of the sockeye supply to 39.7 percent in 1988.

Due to variations in sockeye runs, the percentages have translated into actual catches of between 2.9 million in 1985 to 405,000 in 1995.

The agreement allows the Fraser Panel of the Pacific Salmon Commission to modify the seasons if it appears that too many fish will be harvested or that spawning goals won't be met.

Gillnetters Make-up income enhancing and restoring rivers and streams

Clatsop Soil & Water Conservation District has been a leader in countywide efforts towards Salmon Enhancement. In the past year, Clatsop Soil & Water has been responsible for installing eighteen miles of fencing and 15,000 alder, spruce, cedar, hemlock, and fir trees to protect riparian areas on the Nehalem River. These efforts were made to stabilize stream banks and decrease degradation caused by livestock. This work was made possible by the Hire-The-Fisher Grant designed to help local Salmon Fishers cope with declining salmon returns. The fishers employed by the District include Dallas Van Etten, Mark Hawkins, AI Holmgren, Dennis Baker, Kevin Hawkins, Steve Gleason, Brian Davis, Robert Kee, and John Sprague.

The District was also responsible for installing almost a mile of fence on the Skipanon River under the Skipanon Restoration Grant, and 840 feet of fence on Bear Creek under the Bear Creek Restoration Grant. The Governor's Watershed Enhancement Board made both projects possible.

We are continuing these efforts in the coming year, through the Jobs-in-the-Woods grants from the U.S. Fish & Wildlife Service. The restoration projects will include instream work on the Louis and Clark River to enhance salmon spawning grounds. It will also include fencing and tree planting on the Klaskanine River to enhance riparian areas and stabilize stream banks. If you are interested in any of these projects or would like to know more about them, please contact the Clatsop Soil & Water Conservation District.

Clatsop Soil & Water Conservation District
P.O. Box 716
Astoria, OR 97103
(503) 325-4571 swcd@seasurf. net

A Wave Goodbye

Halvor K. Rodal

Halvor Karl Rodal, 93, died Dec. 18, 1997, at his home on Puget Island.

He was born Sept. 11, 1904, in Bronnoysun, Norway, to Nels B. and Petra L. (Hansen) Rodal. At the age of 3, he came with his family to Ballard, Wash., where he lived until age 9, when he moved to Puget Island and remained there the rest of his life.

He and his father helped build the Puget Island Grange Hall and the Puget Island Grade School.

Mr. Rodal worked as a commercial fisherman on the Columbia River and in Alaska for 40 years. He also worked as a Pilebuck for several years. He was a past member of the Pilebucks Union and the Fishermen's Union.

He enjoyed doing yardwork.

He and Olive Anita Brecks were married Dec. 2, 1933, in Vancouver. She survives him at home. Also surviving are a daughter, Helen Ann Jolly of Brea, Calif.; a son, Larry Rodal of Cathlamet; three brothers, Norman Rodal of Sandy, Ore., Lloyd Rodal of Portland and Roy Rodal of Cathlamet; two granddaughters; and one great-granddaughter. He was preceded in death by two sisters, Helga Riley and Edna Ostling; and two brothers, Edwin Rodal and Jennings Rodal.

Atlantic Salmon Fate Should Be Warning To Us...

By Anthony Netboy

As the tragic decline of the salmon populations of the Columbia-Snake system becomes increasingly apparent, it may be worthwhile to ponder the fate of the Atlantic salmon that once ran up all the major rivers of New England and northern New York, and were abundant in Lake Ontario almost to the foot of Niagara Falls.

The Indians fished for salmon and shad by building stone weirs across the rivers and taught the early colonists this technique. In fact, the salmon were probably as important to the Pilgrims and Massachusetts Bay colonists as any other food item, and certainly more important than the turkey which has been so well publicized.

Salmon runs were fabulous down almost to the end of the 18th century. George Brown Goode in his survey of "The Fisheries and Fishery Industries of the United States," published in 1884, remarked that many Connecticut people remember hearing their grandfathers say that when they went to the river to buy shad the fishermen used to stipulate they must take salmon as a tie-in sale. Salmon were so plentiful as to be a drug on the market.

Alas, the situation changed in the 19th century as New England rivers were usurped by textile mills, lumber mills and other impoundments, built without the slightest regard for migrant fish. For example, in 1798 a corporation known as the Upper Locks and Canal Company built a 16-foot dam on Miller's River, a tributary of the Connecticut, some hundred miles from its mouth. For two or three years fish were seen in great numbers below the dam, which they could not hurdle, and for perhaps a decade they continued to appear, vainly trying to reach their spawning grounds.

Eventually the runs disappeared on the Connecticut. When a solitary salmon made its appearance in 1872 at Saybrook, fishermen did not know what it was. They had never seen a salmon.

Change the names and dates and this story will fit numerous rivers in Massachusetts, Connecticut, New Hampshire, Maine and New York. Where dams did not block fish passage, mountains of sawdust poured into the rivers by cut-out-

and-get-out logging outfits, logjams that extended for miles, refuse from textile mills and other poisons helped to kill off the runs.

By the time of the Civil War the salmon fisheries were extinct in all but five or six of the 30 rivers known to have been originally inhabited by salmon in northeastern United States. In some of them the last fish had been taken long ago and in others stragglers turned up occasionally. Among the barren rivers were the Connecticut, 380 miles long; the Merrimack, 180 miles; the Saco, 120 miles; the Androscoggin, 220 miles; and some 20 smaller streams.

Salmon runs were left only in the Penobscot, Kennebec, Dennys, East Machias, St. Croix, and the Aroostook, a tributary of the St. John. The Penobscot yielded 5,000 to 10,000 fish yearly and the Kennebec 1,200, a mere pittance compared to the 18th century catches.

In the 1880's about 200,000 pounds of salmon were being netted annually in Maine rivers by commercial fishermen, and unknown quantities were taken for local consumption. There were no conservation laws in those days. Fish were poached outrageously with every kind of gear. Anti-pollution laws were unknown.

In the 1870's the states of Maine, Massachusetts and Connecticut joined in a modest restocking program, obtaining eggs from Canada, which has retained most of its Atlantic salmon stocks to this day, and planting them in suitable streams. But often when the offspring of these fish returned from the ocean they were mercilessly netted or pilfered. States could not stop the slaughter.

As we look back, it is clear that no people frittered away its Atlantic salmon wealth as wantonly as the Americans did. Despite an attempt by the Maine Sea-Run Atlantic Salmon Commission to restore some of the most favorable rivers in recent years, only a few hundred salmon are caught every year. Attempts to introduce Pacific salmon in eastern rivers were a failure, just like attempts to introduce Atlantic salmon in northwestern rivers.

As we consider the future of our Pacific Northwest salmon, harassed by mammoth dams and long, slack-water reservoirs, overheated and overpopulated with predators, we cannot help but wonder if 50 or 75 years from now the chinook, silver, chum, blueback and possibly the steelhead will not be in the same perilous state as New England salmon are today—not as dead as the dodo, but barely hanging on.

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fishery, our % of impact was a total of 0.43 or 13.1 fish, sport catch was 3.72 and treaty people 609 fish or 21% of impact on Snake river wild which are to return in number's of around 700 fish.

At the meeting on the 22nd we asked tor a 12 hour fishery on the 24th, 3:00 p.m. to 7:00 am. , in which the Joint Staff said we would onty catch 2 to 4 Snake River wild and some ot our allocation of strugeon, but the compact said no way could we have that fishery because they made the mistake of letting the sport people catch too many in the first part of September. So now we have to wait until october to get back in the river.

The number of Salmon over Bonneville thru Sept. 21st was 157,000. Catch numbers thru that date are, Treaty fishermen 44,000, Sport 12,000 and lower river commercial tisnermen 1,600. So what it all come's down to is another case of Unfair management and now are we going to change that? I'm open tor some idea's and suggestion's.

— Jack Marincovich,
Executiv e Secretary, CRFPU.

Columbia River Gillnetter

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