

A History of Cortes Island Shellfish

By Marcel Creurer – reviewed by Kathy Francis

30/10/29

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Part One - Antiquity

For countless generations, long before contact with European explorers, the indigenous people of the West Coast relied on the bounties of the sea for their sustenance. Principle among this (second only to salmon) was the collection of shellfish, or "beach food." Butter clams, littlenecks, horse clams, geoduck, cockles, mussels and rock oysters were the staples. The large middens of oyster and clam shells at Smelt Bay, the Gorge and Squirrel Cove attest to the importance of these bi-valves to the early inhabitants of Cortes Island.

Even before the Toba Inlet people moved their main village to Squirrel Cove in the late 1800's they would paddle to Cortes to dig clams and trade with the Lha 7amin (Sliammon) peoples. There were many good clam beaches around Cortes, the more popular being the inner bay of Squirrel Cove, the Gorge, Corby's Bay and the lagoon at Mansons Landing.



Clam garden – courtesy of Judy Williams

The Tl' u'hus (Klahoose) and the Lha 7amin peoples engaged in an early form of mariculture through the conscious effort of cultivating clean clam-beds. As they dug clams, the people moved the rocks to the edge of the beach or piled them up beyond the low tide mark. The terraced drop-off running from the Gorge government dock for 1.5 kilometers to the tidal islets are believed to have been constructed to form what is now referred to as "clam gardens." Clam digging, and the maintenance of clam gardens, were communal activities in which all members of the family were engaged. (Excerpt from *Clam Gardens* by Judy Williams.)

Clams provided a dietary change from salmon, and, like salmon, butter clams preserve remarkably well. They could be harvested in the winter, and provided higher amounts of carbohydrate than fish. Dried clams dipped in oolichan grease provided a spectacular balance

of protein, carbohydrates and Omega 3 oil. Smoked and dried butter clams were woven on three long sticks. The two outer sticks were thrust through the bodies or pillows of the clams, while the necks were interlaced around the centre stick. One clam was strung on top of another. The plaiting was so beautifully regular that the finished product, a braid of clams two feet long and six inches wide, looked like an elaborate piece of knitting. Clam strings were hung around the neck so clusters could be pulled off for an impromptu snack. Their storability made them not only an important food source, but they were also a valued trade item.

Shellfish lore featured prominently in the mythology of the Tl' u'hus people. *Clams and other beach foods were the grandmothers of Mink. When Mink visited the house of the wolf-people to boast of the method he used to kill Kakiylhumixw, the handsome young wolf-man, Mink escaped with the aid of many of his grandmothers. At the right moment, all of those shellfish jumped into the fire. The Wolf's dwelling was filled with steam, and Mink was able to escape.*

Shellfish also served as musical instruments, items of personal adornment, trade items, and were even used for their medicinal qualities.

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The following will serve as an introduction to **A History of Shellfish on Cortes Island**. We have not been able to talk to everyone involved, so if you have any corrections/additions you would like to see (stories, photos, etc.) please contact Marcel at (250)935-6681; e-mail – jumarcortes@msn.com

Time Line

- **Antiquity** - * Klahoose and Sliammon peoples harvest clams and rock oysters; cultivate clam gardens - our first evidence of shellfish aquaculture on Cortes.
- **1895** - * R.E. Palmer discovers oyster beds in Von Donop and Carrington, and harvests them for the Vancouver and Victoria markets.
- **1899** - * Atlantic oysters shipped to B.C. in an attempt to develop a viable oyster industry.
- **Early 1900's** - * Granny Hague and her son-in-law, Delmark Lowe, set up a clam cannery in Mansons Lagoon.
- **1912** - * Japanese (Pacific) oysters introduced to the American west coast.
- **1920 – 1980** - * Butter clams are B.C.'s major bivalve export.
- **1926** - * First large quantity of Pacific oysters shipped to B.C. from Japan.
- **1938** - * Harry and Teresa Daniels operate the first known Pacific Oyster lease in Von Donop; they construct inter-tidal pools for growing oysters.
- **1950** - * Pendrell Sound set aside as preserve to protect natural setting grounds.
- **1950's - '60's** - * Cortes beaches thick with oysters – sporadic shipments of huge quantities of oysters shipped by barge to shucking plants in Okeover, Sooke and Baynes Sound.
- **1960's** - * Wes Parry operates a seed collection operation in Pendrell Sound.

- **1969** - * The ferry comes to Cortes – changes transportation methods.
- **1970's** - * Oyster farmers begin experimenting with off-bottom culture techniques.
- **1972** - * The French place an order for 200 tonnes of oyster brood stock.
- * The Cortes Island Shellfish Co-op is formed.
- * A three year moratorium is placed on shellfish leases on Cortes Island - thought to be the first move of its kind in Canada.
- **1974** - * Mansons Landing Provincial Park is established, and Mansons Lagoon becomes off-limits for wild fisheries.
- **1977** - * A group of UBC grad students experiment in Carrington Lagoon.
- **1978** - * Jimmy Hansen builds processing plant in Mansons.
- **1979** - * Redonda Sea Farms (RSF) begins operation in Refuge Cove.
- **Late 1970's** - * Oyster stocks declining rapidly, and many beaches around Cortes are picked clean.
- **1982** - * Don Melnechenko, along with RSF, designs and builds the first oyster raft using foam floatation.
- **1985** - * RSF builds seed setting facility in Squirrel Cove.
- * RSF buys plant in Lund, and set up freezer operation.
- * The market for butter clams collapses in favour of steamer clams (Littleneck & Manila clams.)
- **1987** - * RSF buys Manson plant from Jimmy and Diane, and expand it.
- * Nor-Lite Seafood sets up in Redonda Bay.
- **1989** - * Area based licensing introduced by the government for wild clam fisheries.
- **1993** - * Brazilian oyster farmers work with Cortes farmers as part of the Brazilian Mariculture Linkage Program initiated by Jack Littlepage of U. Vic.
- * Von Donop declared a Marine Park, and becomes off-limits for wild fisheries.
- * The Cortes Island Seafood Association is formed; concerned over the possible pollution of our waters from biotoxins being dumped into the water, they take on the Powell River pulp mills..
- **1994** - * Local farmers design and build high volume oyster harvesters.
- * Many new jobs are created through contract harvesting and contract stringing operations.
- **1995** - * Setting plant in Squirrel Cove is shut down.
- * RSF buys 50% interest in Fanny Bay Oysters.
- * DSO Ltd builds the "flupsy," a high volume single seed grow-out operation.
- **1997** - * Hostile take-over of RSF by Fanny Bay Oysters;
- * The Mansons plant is shut down permanently.
- * The Lund freezing plant is shut down.
- * Tenant farmers are threatened with expulsion from their leases.
- **1998** - * The CISG Co-op is formed, and obtain lease in Teakerne Arm.
- * Many tenant farmers negotiate to purchase their leases from Fanny Bay Oysters.
- * The Bee Islets Growers Corporation (Big-C) is formed by a group of local growers, and purchase the lease in the Gorge.
- * License limitations are imposed on the wild clam harvest by the government, drastically reducing the number of licenses issued.
- * The Provincial government commits to doubling the amount of crown land available for shellfish aquaculture to 42.3 sq. km. within the next ten years.

Part Two – Commercial Ventures – Wild Fisheries

Long before Europeans made their way to this area, coastal natives organized their lives around the sea and its wild bounties. Butter clams have been a major food source for coastal people for at least 2000 years, providing a dietary change from salmon and deer meat. The portability of smoked and dried clams made them a valuable trade item.

Butter clams were plentiful around Cortes Island, and now, as was then, the harvest of the sea remains a central organizing principle in the lives of many local men and women. Until the beginning of the 1970's, what there was of a shellfish industry on Cortes was more involved in harvesting than in farming. From the 1920's to the early 1980's butter clams were B.C.'s largest bi-valve export.



Tyee Brand Clams packed exclusively for the Hudson's Bay Co. by Cortes Co-operative Co. B.C. circa 1920.

At the turn of the century, Delmark (Dan) Lowe and his mother-in-law, Lydia (Granny) Hague, set up a clam cannery in Mansons Lagoon under the name of Cortes Co-operative Co. B.C. They dug clams with Granny's five daughters; Dan and Granny cleaned and canned them. Granny Hague's Cannery, as it was locally known, packed clams expressly for the Hudson's Bay Company under the label of Tyee Brand Clams.

An active commercial market existed for butter clams until the mid 1970's. The nectar was used for making clamato juice among other things, and the meat was chopped up for clam chowder. Then, due to a change in market demands, steamer clams (Manila and Littleneck) have dominated.

The Hansen Brothers, Jim and John, dug clams together as early as 1964, and by the early 1970's there were several people involved: Billy Block Sr., his son Billy, Jim Hill, Don McLean, Herman and Eva Francis, Bob Dominic and Doreen Guthrie to name but a few. Jimmy Hansen built pre-fab cabins on floats for living accommodations in Von Donop Inlet where he, John, Sam and June McLean, and Dick Emerson spent the winter digging clams (after breaking ice in the bay at 3:00 AM) for Garnet Steverson, a buyer in Sooke.

Pat McDonnell dug clams in the off-season from fishing, and recalls receiving \$.03 a pound for littleneck clams and \$.05 a pound for manilas in the early 1970's. 'We had to pick a lot of clams,' but, as he puts it, 'at the end of the day we still had money in our jeans.' In 1975, he and Don (Bulldog) McLean, with the help of Mike Talbot, designed and built the first mechanical clam digger. It was like a push mower on wheels that operated under water. A jet of water would lift the clams from the sand and deposit them into a 2 ½ inch mesh tray which screened out under-sized clams. They were able to harvest upwards of 50 pounds of clams in one hour in the Von Donop lagoon.

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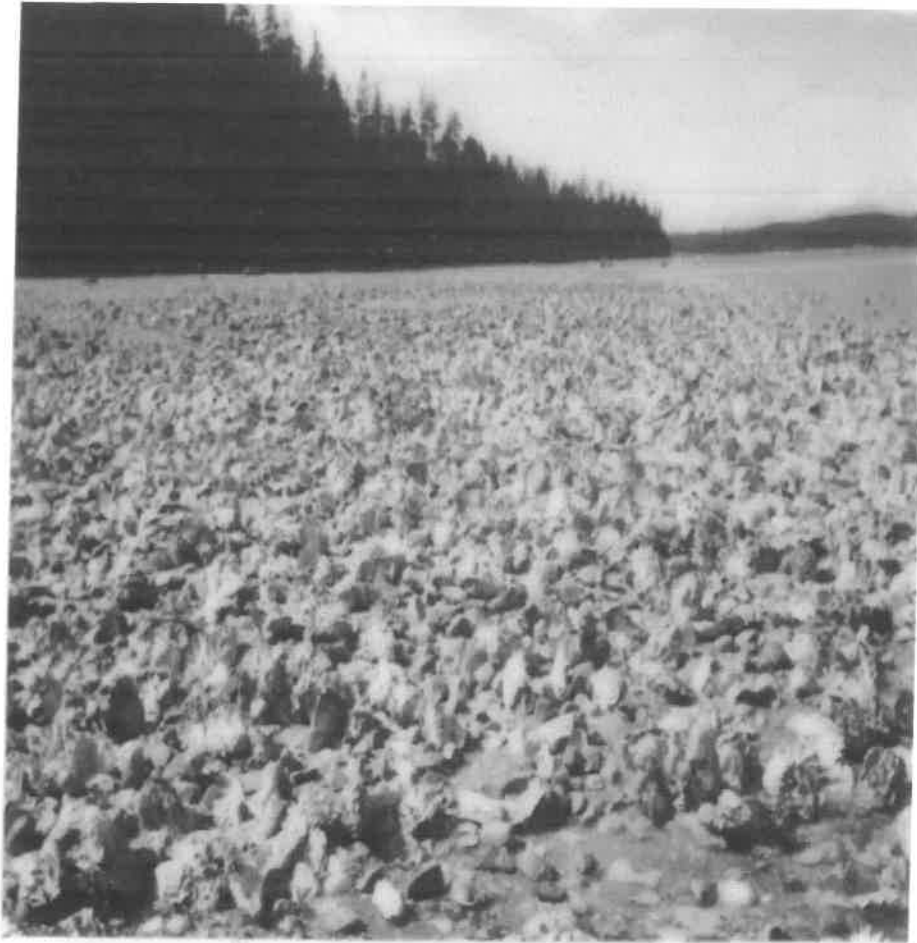
The earliest record of a commercial oyster operation on Cortes Island appears in the following excerpt from the Victoria Daily Colonist:

June 16, 1895 – Mr. R.E. Palmer, P.L.S., of Vancouver, acting under instructions from the Surveyor General, made a survey of Valdez (Quadra) Island last year, and in the course of his work discovered several large oyster beds. At the head of Carrington bay in a salt lagoon of considerable extent he found large quantities of Olympians of good size and fine flavour. At Von Donop creek another good sized bed was located, the bivalves being equally fine in quality and size. In the fall a shipment of them was made to Vancouver, where they found a ready sale and were pronounced as good as any oyster on the market. A party of Gentlemen have now secured exclusive fishing rights on these newly discovered beds, and plans are being made to start work on a large scale in a short time. Victoria and Vancouver will furnish the principal market.

With the arrival of colonists in the mid-1850's, over harvesting of the small, slow-growing native west coast Olympia oyster *Ostrea lurida* led to its decline. The Federal Biological Board of Canada attempted to build a sustainable oyster industry on the west coast by transplanting Atlantic oysters *Crassostrea Virginica* to B.C. Several barrels of oysters were shipped from P.E.I. to Vancouver Island as early as 1899. While the Atlantic oysters survived, the general opinion was that they could not reproduce, possibly due to the colder Pacific water.

A second species, the Japanese (Pacific) oyster *Crassostrea gigas* was introduced from Japan in 1912 - the first large quantity of Japanese oyster spat was shipped to British Columbia in 1926. They adapted readily to the warmer waters of Pendrell Sound and Ladysmith Harbour, and multiplied rapidly.

In 1942, 1958 and 1966 there occurred a series of "general spat falls" where oyster spat from the prolific Pacific oyster drifted along tidal currents to spread over the entire coast, particularly in the northern part of Georgia Strait. Beaches were covered with infant oysters that would build on top of each other.



'Marina' oyster
Beach Wooah!

Photo courtesy Jim and Dianne Hansen

In the 1950's and 1960's, the beaches of Marina Island, Smelt Bay and the Gorge Harbour were covered with long, banana-shaped oysters up to one meter deep in places.

Not all oysters taste the same. In fact, of the many species, only a few have any commercial value. The size, shape, flavour and food value of oysters are severely affected by their habitat, the food they eat and the temperature of the water. Cortes, with its temperate waters, nutrient-rich tidal flows, and low industrial and residential development, is ideally situated for the cultivation of Pacific oysters, making them sought after the world over.

Harry and Teresa Daniels operated what has to be the first oyster "lease" in Von Donop in 1938. However, at that time there was nothing yet like an established "industry" in British Columbia.

People were otherwise gainfully employed in logging and fishing, and the picking of shellfish was not regarded as a mainstay.

Jack and Lillian Parry and Betty Jeffrys were the first to pick and sell oysters in Smelt bay. They got \$.05 a pound in the early 1940's. Jack took the oysters by boat to a fishing scow that was anchored in Quartz Bay.

The introduction in 1949 of the first comprehensive set of regulations for sanitary control of the shellfish industry was a significant milestone that changed oystering from a relatively disorganized business into a stable, responsible industry.

Until the beginning of the 1970's, what there was of an oyster industry on Cortes was more involved in harvesting than in farming. Large scale operations occurred periodically when huge quantities of beach oysters were picked into coffee bean sacks and shipped by barge or transport truck to shucking plants in Sooke and Baynes Sound.

Bruce Ellingsen recalls a scene from the 1960's where Robbie Graham's flat deck was in continual motion up and down the beach picking gunny sacks of oysters. 'Of course,' Bruce added with a chuckle, 'if he didn't keep moving, he'd most likely sink the truck in the soft sand.'

The first official record of an oyster lease here was to Joe Tarnowski of Union Bay. He acquired a lease on Marina Island reef on January 31, 1972, then assigned it to Jimmy Hansen in 1975. Jimmy had obtained six leases in all, totaling 43 acres, which were used for staging and "fattening" of oysters harvested from other sites. Jimmy built four pre-fab cabins on Marina Island for his pickers. Johnny Hansen spent about a year in one of these picking oysters into large burlap sacks. Herman Hendinger must have spent 25 years in one of these cabins, while Gilles St. Amand occupied one since the early 1980's. Fred and BevAnne Pickard lived on their sailboat, and also picked oysters for Hansen & Co.

Operating under the name of Cortes Island Custom Industries, Jim Hansen shipped shell stock to Cooper's Cove Oyster Farm in Sooke once a week. Using a hydraulic boom of his own design fixed onto a log float, Jimmy could load six burlap sacks full of shuck oysters from the beaches at a time. He would then tow the loaded float with a small tug to Manson's Lagoon, which was being used as a staging area at the time, let the float go dry at low tide, then load 300 sacks of oysters into the Cooper's Cove's Kenworth truck. He boasts that he could load the truck in one hour flat, working alone.



Hansen oyster barge - photo courtesy Jim and Dianne Hansen

This sort of activity came and went like the tides, however. It wouldn't be until the early seventies when the French came calling that an organized group of locals "took some time off" to do some beach work.

France's native oyster had been decimated by disease and pollution in 1968 - 1969, so the amorous French, unable to survive without a regular intake of their favourite aphrodisiac, went looking for a "specific non-native oyster" with which to rebuild their industry. The Pacific oyster grown in the Gorge were considered the finest available to replenish their oyster beds. As their "recovery animal," the French hoped to cross-breed the Pacific with the Portuguese oyster to produce a strain resistant to their high levels of pollution.



Cleaning and grading oysters for France (Photo courtesy Gunnar Hansen)

Doug Morton and Wes Parry were instrumental in organizing the operation, and once again the beaches of Cortes were thick with oyster pickers. Thirty to forty people, including children, were involved.

Paul Kirmmse remembers using a piece of steel from an old car spring to pry oysters off the beach. He received \$1.00 for each wheelbarrow full that he picked and dumped onto a waiting barge. The oysters were then moved to Mansons Lagoon where they were scraped clean, sorted and weighed into 70 lb sacks.

Robbie Graham would haul a semi-trailer load to Vancouver, then return for a second load while the first was being treated with a formaldehyde solution to kill flat worms. There were strict time constraints with stiff penalties for late delivery, so every shipment was delivered precisely on time. It took two semi-trailer loads – 1100 bags for a total of 77,000 lbs of oysters – to make up half a load on a DC8 bound for France via the polar route.

Over 200 tons of oysters were shipped to France, and they achieved a 96% survival rate. The entire operation was considered an unqualified success. The French still owe a debt of gratitude to the residents of Cortes Island for their help in once again becoming Europe's top producer of oysters.

In 1974, Mansons Lagoon was established as a Provincial Park, thus bringing to an end long standing opportunities for locals to harvest shellfish from the lagoon on a commercial basis.

In 1989, area-based licensing was introduced, then, in 1998, in line with the clam management reform initiatives, license limitations were imposed reducing the overall number of clam harvesters.

There still exists an active wild harvest on Cortes Island, both for clams and for oysters. However, it is done under strictly enforced controls, and in very specific areas only.

Part Three - Commercial Ventures - Shellfish Farming

History consists of its winners and losers, heroes and villains. The history of the shellfish industry on Cortes Island is no different. While the villains and losers, and the lost dreams have a bearing on the development of events in our industry, they are best recounted elsewhere, possibly in a work of fiction. They will only be cited here to illustrate the steep learning curve of a fledgling industry. My desire is to concentrate on our many champions and the note-worthy events that have shaped shellfish aquaculture as a whole. There have been many “firsts” created on Cortes, and we have spawned many independent thinkers who have left their mark on the West Coast industry, and also Internationally.

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The transplanting of Atlantic oysters into Boundary Bay, Esquimalt and Ladysmith harbours in 1899 is considered to be the start of shellfish farming in British Columbia. However, the first record of oyster farming on Cortes Island was by Harry and Teresa Daniels who grew Pacific oysters on the beach in Von Donop around 1938. (*Not to be confused with the Harry and Margaret Daniels who ran the post office in Seaford in 1919.*)



Harry Daniels dyke system - photo courtesy of the Cortes Island Museum & Archives

Their daughter, Margaret Hartman, recalls that the “lease” was situated between the island and the spring on the Squirrel Cove side of the bay. They created beds for the young oyster seed by constructing dykes that formed large (26 ft X 50 ft) pools to retained water at low tide – this way the seed oysters never went dry. Raising oysters from seed to market size took several years and a lot of work. The beds had to be kept free of mud. Starfish had to be gathered and killed. Ice had to be broken and driven away in winter, else the oysters would become trapped in the ice and float off down the channel at high tide.

As the enterprise moved along they were joined by Alf and Ollie Layton. Alf made his living by working in the woods, but also worked his oyster lease. The Laytons lived over by the island with his brother Jimmy Layton who built the causeway and had a picket fenced garden from which he supplied fresh fruit and vegetables to the store at Squirrel Cove.

The first "official" oyster lease in the Cortes area, according to government records, was lot 320 on Marina Island granted to Joe Tarnowski of Union Bay on January 31, 1972. The "farming" of oysters was still not established on Cortes at this time, the industry being more interested in harvesting wild oysters off the beach that were spawned through natural sets.

While massive "general spat falls" occur roughly in 15 year cycles, the Pacific oyster spawns each year, but to a somewhat lesser degree. The beaches around Cortes are reported to have been up to three feet deep in oysters at one time, but by the 1980's these spat falls had failed several times, and oyster stocks were declining rapidly due to over picking. Oyster growers then began to turn to areas like Pendrell Sound for seed collection to restock their beaches. Pendrell, with its unique propensity to generate oyster seed, had been set aside as a reserve in 1950 to protect breeding oyster stock.

Every device known to man was tried as seed collectors - rope, pipes, plastic lids, concrete chips, buckets, barrels, shells of every description hung on wire from log booms - even cedar boughs tied into bundles were tried. Old oyster shells packed in vexar bags (cultch) and large bundles of french tubes (pipes) eventually proved the ideal. These were spread along the beaches and rock shelves of Pendrell Sound, or were suspended in sheltered bays in the hope of capturing a good natural set. Seed collection was always a hit and miss affair, often gauged by the cycles of the moon, or by when the foxglove turned to seed at Eagle Acres. Spawning oysters are unpredictable and yet timing was everything - a few days too soon and your cultch would foul up, a few days too late and you would miss the main event entirely. One person even smashed a few oysters growing on the rocks with a hammer in order to trigger that all important spawn.



Oyster barge - photo courtesy of the Cortes Island Museum & Archives

Pendrell Sound oyster barge, scow and living quarters for the crew converted from former North Vancouver ferry boat. This outfit belonged to B.C. Packers and was located at the extreme head of Pendrell Sound where they were involved in collecting oyster spat. Circa 1972-3 (Courtesy of the Cortes Island Museum and Archives)

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Wes Parry oyster operation in Pendrell Sound circa 1956 - Photo courtesy Maryanne McCoy

Wes and his brother Gordon also had oyster rafts at the mouth of the lagoon and at the head of Pendrell Sound in the late 1940's and early 1950's. The rafts consisted of logs purchased from Bert McCoy, some of which were burnt out cedar to last longer. Across the logs were poles from which hung 10 gauge galvanized wire lines loaded with oyster shell. In 18 days there were about 85 seed oysters on each shell. Several people were involved with this operation, including Wes' brothers, Bill, Jim and Jack, Willie Joseph, Ernie Keen, Lill Hill, Jimmy Hill, Bob Dominic and Rose Louie among others.

In 1972-3, Wes Parry was in charge of another oyster barge for Surfside Shell made from a 175 foot stripped down freighter ballasted with cement. They collected oyster spat using cement coated sheets of light weight veneer suspended from boom logs. When the spat had developed sufficiently, it was removed from the veneer by twisting the panels. The small oyster seed was then placed in plastic trays to mature before being spread on the beaches.

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The crew of the *Staddie* Dick Teames, Ian Hayes, Lori Sirk, Toby Hayes, Doug Morton, circa 1973. They've just off-loaded a shipment of oysters - photo courtesy Lorena Teames.

During the mid-1970's, a group of oyster harvesters who were becoming concerned over the decline of oyster harvesting opportunities, got together to form the Cortes Island Shellfish Co-operative. Ean Hay was President, Doug Morton - Manager and Joyce Hope - Secretary. They were visionaries with the view of creating a sustainable shellfish industry for the Island that would compensate for the decline in the local salmon fishing and logging industries. They successfully petitioned the government for leases under the Co-op umbrella for use by local residents, thus keeping outside interests at bay. They then instigated a 3 year moratorium on new leases around Cortes Island, which is believed to be a first of its kind in Canada.

Mansons Lagoon was pretty well picked clean of oysters by this time, so the Co-op organized a restocking program for this invaluable growing area. However, the lagoon was incorporated as a Provincial Park in 1974 making it off limits for farmers.

When the Co-op dissolved in 1980 the leases they held were subsequently assigned to individual members.

In 1976/77, a group of graduate students from UBC had notions of farming oysters in Carrington Bay lagoon. They attempted to grow out oysters in primitive bread trays hanging from log floats. This is the first known deep water growing operation in the Cortes area, but the salinity in the lagoon was too high for it to work. Bottom culture, or the seeding and harvesting of beach areas, had been the original technique used by growers, with beaches having a high natural set regarded as the most valued. The beaches around Marina Island, Smelt Bay and the Gorge Harbour are among the best on the coast.

By this time, Jim Hansen owned seven of these beaches, and was shipping off tonnes of oysters each week. He was astute in recognizing that many jobs were being shipped off the Island with his oysters, so in 1978 he set out to build a processing plant on Cortes Island. Unable to get government assistance for the project, his parents, Harold and Dolly Hansen donated the land, and his brothers, Ted and Dennis, and cousin Herb Van Os provided the venture capital. As well as processing oysters from his own beaches, Jimmy also bought and sold product from other

independent growers. For nine years he processed oysters, clams and prawns, and even salmon and cod for a time. His clam washer would process up to 15,000 lbs of clams a week, and his setting tank provided oyster seed to replenish the leases. This created valuable local employment, and the money stayed on the Island.

A creative thinker, Jimmy designed a depuration tank for clams contaminated in polluted waters. By zapping them with ultra violet rays and ozone he was able to remove the contaminants without having any adverse effect on the live product. The Department of Fisheries tested and accepted his results, but it would require years of testing before they could approve it for commercial use. Depuration is a common practice employed today.

Cortes Island is never short of creative thinkers. In the late 1970's, Fred Kaelebel experimented with a sluice and raceway operation off the Gorge dock. He would pump seawater into holding tanks on the foreshore and let it trickle back over oysters growing in a channel mounted to the dock. This proved commercially impractical, however, and slipped into the annals of history simply to demonstrate that oyster growers are a fiercely independent lot never short of new (and sometimes wacky) ideas to advance their passion for the industry – Bruce Ellingsen tried six inch PVC pipes sealed at both ends as floatation for his long lines; Walter Frankie used cedar twigs to collect oyster spat; Ian Winter and Victor McLaggan fantasized that they could grow designer oysters using special trays stamped with various symbols; e.g.- heart shapes for Valentines. Out of these ideas there grew a solid industry forged by people who allowed themselves to think outside of the box.

In March of 1979, Norm Gibbons and his partners bought an oyster farm operation from Mike Humphries on Lesquiti Island and moved it lock stock and barrel to Refuge Cove where he started Redonda Sea Farms. Originally, it was a simple long line operation growing Golden Mantle oysters in trays for a prominent oyster bar in New York's Union Station.

He went on to develop various markets in New York and California, but found that local oyster production was insufficient to meet the demand. By this time, the beaches around Cortes had pretty well been stripped of oysters, and natural setting in Pendrell Sound was no longer producing sufficient results. Operating on research grants, Norm focused his attention on seed production and remote setting techniques. He purchased two cement barges, one which was used as a packing plant, and the other as a setting facility. This worked for a time, until one of the barges sank to the bottom of Refuge Cove, where it rests to this day.

In 1982, Norm joined a three week, government sponsored fact-finding mission to Japan. At Hiroshima Bay he observed oysters growing in deep water suspended from bamboo rafts. An interesting idea, but, how can you economically build rafts out of readily available local materials? Previous attempts, dating back to the 1960's, using logs for floatation proved susceptible to teredos. These would burrow into the wood, causing the logs to eventually sink. Foam blocks and 45 gallon plastic barrels proved a better way.

Don Melnechenko, working in conjunction with RSF, designed and built the first oyster raft using foam blocks as floatation. He contracted with Norm to grow seed on French tubes (pipes) under a buy-back scheme: - the RSF setting facility would seed the pipes, Don would grow them

out to X-small size on his deep water lease in the Gorge, and RSF would buy back the product for re-seeding beaches. The rafts he designed had to be sturdy enough to be towed by the *Sea Ace* - with product still hanging - to various beaches around Cortes Island. He had to time his tow carefully so as to clear the Gorge entrance at high slack without going backwards and still be able to reach his destination with sufficient high water to cut his load free directly onto the beach. The tenant farmers would then strip the pipes on the beach, and would either grow them out for shuck or sell them as beach hardened single oysters.

In 1985, Redonda Sea Farms moved their operation to Cortes Island and built a setting facility and new offices at Squirrel Cove. The facilities hosted many a spirited hot tub party in the setting tanks during the off-season, and to watch Norm, buck naked where previously only aspiring oyster larvae swam... well... RSF also bought a clam processing plant from Bob Paquin in Lund, and re-built it as a flash freezing operation for Individually Quick Frozen (IQF's) oysters. This created a huge market potential in Asia and overseas, as oysters could now be shipped more economically over water in large cargo containers.

That same year, the market for butter clams collapsed in favour of steamer clams, and manila clams were added to the farmers' inventory. Since then, Japanese scallops, Blue and Gallo mussels and geoducks have been added to the list of shellfish species being grown on farms around Cortes Island.

By 1986, Jimmy and Dianne were beginning to feel the effects of the ever increasing mounds of bureaucratic paperwork and government interference associated with processing plants, and accepted Redonda Sea Farm's offer to purchase Hansen Bros. RSF expanded the operation on Hansen Rd. by adding a second building that housed a large processing and packaging plant for clams and oysters.

Norm's farming operations were being run along the lines of a modern day feudal system - the Lord of the Manor owned the leases, and he recruited independent tenant farmers to work them. The tenant farmers would buy their seed from Redonda Sea Farms and then sell the grown stock back through them. RSF was also the source of supply for most of the growers' needs: string, rope, bags, vexar, gloves, shucking knives etc. could be purchased at reasonable prices.

Norm encouraged anyone on Cortes who was interested to build their own rafts and to lease a space in one of RSF's deep water sites. This system worked well, as it allowed an easy start into the business for people who could not afford their own lease. A wide cross section of the community became involved, providing employment for some and pin money for others. Several off-shoot jobs resulted doing contract stringing and contract harvesting for small raft owners who did not have the necessary equipment. This presented excellent opportunities for the like of Silent Harvest who created the "wheel" harvester, and for Doug Stirn's more hi-tech *Harvestar*.

In its heyday, Redonda Sea Farms operated the seeding plant in Squirrel Cove, the processing and shucking plant in Mansons, a shucking and freezing plant in Lund, held title to roughly 80 acres of beach and 50 acres of deep water leases, and employed an unknown, but not insubstantial amount of plant workers, lease managers and farmhands on Cortes, Lund and Refuge

Cove. They accounted for 60% of the provincial production of oysters, with an annual turnover in excess of \$6 million.

But, as Norm puts it, "Perhaps the biggest thing Redonda Sea Farms did for local farmers was two fold: Firstly, we came up with a way to supply them with seed; and secondly, we developed quite an extensive half shell market – something which wasn't really there until we came along." Oyster "farming" as an industry had finally arrived on Cortes.

Redonda Sea Farms then purchased 50% ownership of Fanny Bay Oysters, a move designed to finance the construction of a large, ultra-modern processing facility in Fanny Bay. It was also a move which would eventually prove to be a colossal disaster for Norm, and one that greatly affected the way oyster farmers operated on Cortes.

Meanwhile, a program started by Jack Littlepage of UVic led to some rewarding moments for several Cortes Island growers. The Brazilian Mariculture Linkage Program (BMLP) set up in conjunction with the Universidade Federal de Santa Catarina called for prospective oyster growers from Brazil to visit Canada and learn from farming operations on the West Coast. Many on the coast could not be bothered with the program, or feared they might be assisting a future international competitor, as had happened previously with Chili. Cortes Island, on the other hand, welcomed them with open arms. This led to a close association with our Brazilian counterparts. We were hosts to several different groups over the years, and in return some of our growers went to Brazil to visit operations there. Julia Rendall and Marcel Creurer were privileged to go and help construct a setting operation in Rieberoa for the Cooperativa Agricola da Ilha de Santa Catarina, and to teach their members on how to set single seed. A group of forty Portuguese speaking Brazilians attended, which proved to be somewhat of a challenge as our language skills do not include Portuguese. However, this turned out to be one of the most satisfying experiences of our lives, and we still maintain close contact with our new Brazilian friends.

In 1986, Bruce Ellingsen and Jerry Bown joined Pat Harrison at Nor-Lite Seafarms in Redonda Bay to grow tray oysters using 6" PVC pipe as floatation. The floatation proved inadequate, and the lack of single oyster seed for restocking the trays was a major problem. In an attempt to solve the seed issue, Bruce's father, Elmer, invested a considerable sum in buying seed. In 1990 they built rafts in Mansons Lagoon, which were towed to Redonda Bay. When things didn't work out with the partnership, Elmer, Alf Milstead, and Ken Hansen went to re-claim the seed. In the process of towing the rafts back to the Gorge, Alf, who was standing on the rafts to keep an eye on how things were towing, suddenly disappeared from sight. Only his head was showing above the beams as he had fallen up to his armpits through the raft.

Still smarting from the collapse of Norlite Seafarms, Bruce and Jerry started a new venture, Penn Isles Shellfish in Thompson Bay near Von Donop Inlet. Learning from their experience with Norlite, they filled the bay with jumbo 24' X 120' rafts. Ginnie Ellingsen, while working on the rafts one day, decided to take a short siesta in the warm afternoon sun (one of the perks of being the bosses' wife.) She lay down on the raft with her glasses perched on her chest. A dreamful twitch caused the glasses to slip from their perch and fall into the deep. Some months later, when

the trays were being pulled up for harvesting, lo and behold there were her glasses, slightly fouled, but as good as new.

In 1993 there was a growing concern that the waters around the Northern Gulf Islands were being polluted by effluents from the pulp mill in Powell River. The Cortes Island Seafood Association was formed involving virtually every oyster grower on the Island, and several other Cortesians, to take on the big boys. Rex Weyler helped draft the documents, which was presented to the newly elected NDP government. This became their first piece of legislation passed by the new government, and the *Seafood and Pulp Mills: Striking a Balance in Georgia Strait* still remains as a source of reference for sewage disposal into the ocean.

The Cortes Island Seafood Association, a non-profit organization, has become dedicated to supporting the Island's seafood industry, and to the promotion of clean water so vital in growing safe, quality shellfish. It conducts independent water quality testing on a regular basis, and works with government and local growers to maintain and enhance safe growing conditions. It also constructed the Cortes island Shellfish Interpretive Centre, and initiated the annual OysterFest.

In 1996, Delia Becker temporarily hung buckets of oyster seed off her dock at Joyce Point. Later, having forgotten all about them, she hauled up the buckets expecting to find only empty shells. Instead, the seed oysters had actually grown quite nicely. This prompted Ian Winter to investigate further, which has led to the development of the first "bouncy bucket," a simplified version of the more technical "flupsy" up-weller used for growing single oyster seed.

The flupsy, a rather noisome machine operated by Desolation Sound Oysters, disrupted the tranquility of the Gorge for some time, and triggered much heated controversy between upland owners and oyster farmers. This has caused the industry to focus more closely on environmental issues such as noise pollution and lost equipment due to seasonal storms. The Bee Islets Grower's Corporation have drafted a Code of Practice for the Gorge that goes beyond the industry standard. They also conduct several beach clean-ups throughout the year.

The most dramatic event, however, to affect the shellfish industry on Cortes occurred in 1997. Fanny Bay Oysters, in a hostile take-over of Redonda Sea Farms, ousted Norm Gibbons as General Manager, closed the plants on Cortes Island and in Lund (doing away with some 90 jobs on Cortes alone) and threatened to expel tenant farmers from their leases and replace them with migrant workers.

"We'll show you how to grow oysters" was the statement used by Glen Haddon of Fanny Bay Oysters to justify his actions. This attitude triggered a loud outcry, and tenant farmers dug in their heels to protect a way of life. They eventually negotiated a first option agreement to purchase their leases from Fanny Bay, and with few exceptions these were exercised. In cases where the lease was too large for any one individual, such as the Bee Islets deep water site in the Gorge, the growers banded together to form the Bee Islets Growers Corporation, and raised the necessary capital. Not everyone was presented with this option, however, and some leases were lost to Fanny Bay – notably the deep water sites at Joyce Point and the Channel lease.

The Cortes Island Shellfish Co-op: formed in 1972 by Ean Hay, Doug Morton, Yendor Rodney, George Sirk, Mark deWolfe, Sam and Jane McLean, Iona Wheatley, John Hansen. The government was issuing new leases on Cortes, and this group was concerned that they would end up in the hands of outsiders, such as Mac's Oysters of Baynes Sound. Wanting to create a sustainable shellfish industry on Cortes, they petitioned for and obtained these leases under the Co-op umbrella. They then instigated a three year moratorium on oyster leases in the Cortes area.

Norm Gibbons obtained a deep water lease in Refuge Cove with the view of setting up a fish farm. He was discouraged from doing this by other fish farmers with comments like: "If we had it to do over again, we'd grow oysters instead."

In March of 1979, he bought a longline oyster operation and moved it lock stock and barrel to Refuge Cove where he started Redonda Sea Farms. Norm opened up several new markets for Cortes oysters. When he found that supply could not meet the demand, he focused his attention on seed production and remote setting techniques.

In 1985, Redonda Sea Farms moved their operation to Cortes Island and built a setting facility and new offices at Squirrel Cove. RSF then bought a clam processing plant in Lund and Hansen Bros. on Cortes, which were upgraded and expanded.

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Don Melnechenko: designed and built the first oyster raft using foam blocks as floatation. He contracted with Norm Gibbons to grow seed on French tubes (pipes) under a buy-back scheme: - the RSF setting facility would seed the pipes, Don would grow them out to X-small size on his deep water lease in the Gorge, and RSF would buy back the product for re-seeding beaches.

Bruce Ellingsen: In 1986 Bruce, Jerry Bown and Pat Harrison formed Nor-Lite Seafarms and obtained a deep water lease in Redonda Bay. They grew tray oysters suspended under 6" PVC pipe.

Bruce and Jerry subsequently started Penn Isles Shellfish in Thompson Bay near Von Donop Inlet. Learning from their misadventures with Norlite, they filled the bay with jumbo 24' X 120' rafts and grew oysters on strings.

And so, ownership of local leases shifted from control by a large corporation into the hands of many individuals. Cortes once again moved against the current of the modern world. Instead of the industry getting bigger it became smaller, preferring to focus on quality products rather than on quantity.

But growth and expansion of the industry did not stop. In 1998, the Cortes Island Shellfish Growers Co-op was formed. Wishing to continue the tradition set by Norm Gibbons of providing opportunities for individuals who can not afford their own lease, they obtained a deep water site and a beach lease in Teakerne Arm. At one point, the CISGC boasted to be eighty members strong.

Also, recognizing shellfish aquaculture to be a viable means of compensating for the declining fishing and logging industries, the Provincial government committed to doubling the amount of crown land available for shellfish aquaculture to 42.3 square kilometers within ten years. This allowed for the expansion of many of the leases around Cortes, and many farmers are expanding their operations to include mussels and scallops.

The shellfish industry is constantly in an exciting state of flux, and who knows what new developments tomorrow will bring.

Part Four - The Pioneers

How do you define a *pioneer*??? According to the *Merriam-Webster Dictionary*, a pioneer is “one that originates or helps open up a new line of thought or activity.”

There are many people who helped to form the shellfish industry on Cortes Island - the clam diggers, the oyster pickers, the seed collectors, the aquaculture farmers - all have had a hand in making our industry what it is today. I could try to list them all, but I would fail. Someone is bound to point out an oversight: ‘Uncle so-and-so picked clams for so-and-so in such-and-such a year.’ For the purpose of this article, I will list only those who contributed in some significant way to the industry prior to 1990.

First Nations: Not to be overlooked, but difficult to list, are the Klahoose and Sliammon First Nations people. They traditionally enjoyed the benefits of shellfish, not only for its nutritional value, but for medicinal benefits, as items of adornment, simple tools, play things and as valued trade items. Shellfish lore featured prominently in their mythology. The Tl’ u’hus (Klahoose) and the Lha 7amin (Sliammon) peoples even engaged in an early form of mariculture through the conscious effort of cultivating clean clam-beds - an ancient practice now recognized as fact thanks to Judy Williams’ book *Clam Gardens*.

R. E. Palmer: The first recorded commercial harvest of oysters on Cortes occurred in 1895, when a group of gentlemen shipped oysters from Von Donop and Carrington Bay to markets in Vancouver and Victoria.

Lydia (Granny) Hague set up a clam cannery in Mansons Lagoon under the name of Cortes Co-operative Co. B.C. at the turn of the century. Her five daughters would dig the clams and Granny and her son-in-law, **Delmark (Dan) Lowe**, cleaned and canned them. Granny Hague’s Cannery, as it was locally known, packed clams expressly for the Hudson’s Bay Company under the label of Tyee Brand Clams.

Harry and Teresa Daniels operated the first Pacific oyster lease in Von Donop around 1938. This was also the first recorded attempt at oyster farming on Cortes - if not on the West coast - as they seeded oyster beds for grow-out.

“My parents, Harry and Teresa Daniels had the first oyster lease up in the head of Von Donop in the mid nineteen thirties.

“They grew oysters between the island and the spring on the Squirrel Cove side of the bay. Beds for the seed oysters were created by digging out large squares of the beach to create pools that retained water at low tide – that way the seed oysters never went dry. Raising oysters from seed to market size took several years and a lot of work. The beds had to be kept free of mud. Starfish had to be gathered and killed. Ice had to be broken and driven away in winter.

“As the enterprise moved along they were joined by **Alf and Ollie Layton**. Alf made his living working in the woods and helped out on the oyster lease. They lived over by the island and had a picket fenced garden on it.” – *excerpt from Margaret (Daniels) Hartman in conversation with*

Doreen Thompson and Dianne Hentschel, April 2001 - Courtesy of the Cortes Island Museum and Archives.

Robbie Graham: In his slack periods as a fisherman, logger, gravel-pit operator, etc. Robbie delved into oysters.

“In 1958 I got into oysters. At first we sold to a guy named Fred Vey from Okeover Inlet behind Lund. He came every week with a self-powered barge and took the oysters to his shucking plant. We’d load up sacks, load them onto rafts and float them out where he could load them onto the scow. Later, I sold to Mac’s in Fanny Bay and eventually we trucked them to East Sooke. To collect the oysters, we used a truck with bald tires and loaded them up off the beach. We’d always drive in the same tire tracks so that we wouldn’t sink into the sand or damage more of the beach than necessary. We loaded them on a scow at night, and in the daytime when the scow was floating we’d bag the bigger oysters and leave the smaller ones on the edge of the scow so we could push those little ones back off onto the beach. We’d go to the same beach every twelve months. Other people who came from Vancouver Island wouldn’t pick on the same beaches as we did. There was a kind of gentlemen’s agreement. At first we got 65 cents a sack and later \$2.00 per sack. When we sold to East Sooke we were paid by the pound. I had 30 pickers then. What I wanted was an average of a dollar a gallon for hauling, the pickers got the rest.”

Pat McDonnell dug clams in the off-season from fishing, and recalls receiving \$.03 a pound for littleneck clams and \$.05 a pound for manilas in the early 1970’s. In 1975, he and **Don (Bulldog) McLean**, with the help of **Mike Talbot**, designed and built the first mechanical clam digger.

Wes Parry: Wes owned a 175 ft. self-powered barge that he used to haul oysters. He started a wild geoduck harvest operation, set up the deal with France for 200 tonnes of oyster brood stock, and sold oyster seed collected from Pendrell Sound. He would use spat collectors hung from old conky logs which were low floaters that moved the least in the swells. The collectors were made of light weight veneer panels coated with cement. A simple twist of the panels removed the oyster seed, which were then spread on plastic trays to mature. His operation held a lease under the name of Surfside Shell more than a mile from the head of Pendrell Sound, and employed 15 workers hired on a summer work project.

Jim Hansen: The Hansen Brothers, Jim and John, dug clams together as early as 1964. Jimmy owned seven beach leases around Cortes in the mid 1970’s, and was shipping off tonnes of oysters each week. He was astute in recognizing that many jobs were being shipped off the Island with his oysters, so in 1978 he set out to build a processing plant on Cortes Island. He bought and sold oysters and clams from independent growers, built a clam washer, setting tanks, an ice plant, ran a restaurant, and even experimented with a depuration tank for contaminated clams.

Fred Kaelebel: In the mid to late ‘70s, Fred used to pump sea water into storage tanks above the Gorge dock. The water flowed back down along raceways to lower tanks that had oysters growing in them.