

**THE  
IMMIGRANT  
OYSTER**  
(OSTREA GIGAS)

NOW KNOWN AS  
**THE PACIFIC OYSTER**

by

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PIONEER OLYMPIA OYSTERMAN

IN COOPERATION WITH  
PACIFIC COAST OYSTER GROWERS  
ASSOCIATION, INC.

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# AN ODE TO MY FRIEND E. N. STEELE

And the Introduction and Development of the Pacific Oyster  
By JAY BOLSTER

This ode only proves what a man can do  
With courage and faith to make dreams come true.  
Disappointments and failures defeat many men;  
They only tested the metal of my friend "E.N."

Forty-some years ago, a law passed which banned  
All Japanese from owning~Washington land.  
On his Oyster Bay beds "E.N" employed Japanese  
And was given inside information by these.

Their countrymen near Blanchard had land of their own,  
On which Japanese Oysters were then being grown.  
He inspected and found their high hopes had dwindled-  
Oysters ready to harvest -but feared they'd be swindled.

On account of the law which compelled them to sell,  
"E.N."s employees advised them -"He's a safe man to tell."  
With John Barnes as partner they purchased the land,  
And planned to pay off -with the oysters on hand.

They found restaurants and hotels difficult to please,  
And very much prejudiced against things Japanese.  
E.N.'s brother and wife team came up with a winner-  
Serving Haines Oyster Company a fine sample dinner.

And the brother and wife team had won their first battle  
When Haines Oyster Company signed up for Seattle.  
In West and East Washington the dinners brought luck,  
Serving dinners by day -at night slept in their truck.

They next traveled south, and ere long they could boast  
That "Pacifics" were selling along the whole coast.  
Fifty thousand gallons one year was their top;  
After pulp mills came, to seven thousand did drop.

Since the Shelton mill closed and they've won some controls,  
Olympias are returning and they're reaching new goals.  
With their market expanding there is reason to boast  
Pacifics are now reaching the Atlantic's stern coast.

It's no longer one man's battle; Pacific Oyster Association  
Advertises and sells throughout the whole nation.  
And the man most honored for determination and zeal-  
Who first grew Pacifics -my friend, E. N. Steele.

## FOREWORD

It is only occasionally that a man who starts the development of a new idea or industry, stays with it through the formative stages, meeting problems as they arise; and the fruition of his dreams in a successful industry developed; employing several hundred people; providing profits for not only those who worked with him through the trying periods of small successes, but to others later engaged in the industry; hampered by temporary obstacles and failures, to the achieved goal, such a man is the author of this book.

It has been this writer's privilege to know the author of this book since his Pacific oyster operations started in 1924, when his company imported the first large cargo of Japanese oyster spat (seed) from the Miyagi Prefecture area of Japan. Previous small shipments of trial spat had been imported for a few preceding years prior to Messrs. Steele and Barnes taking over the program under the name of the Rock Point Oyster Company at Blanchard, Washington.

Earl Newell Steele was born in Altoona near Des Moines, Iowa, April 19, 1881; lived at Perry, Iowa, where he graduated from high school and entered the University of Iowa in 1900; graduated in law the Spring of 1903. It is a recorded fact that Steele traveled from Perry, Iowa, to Iowa City by bicycle, and mainly through his own efforts financed his schooling and graduated in law from Iowa State University in 1903.

Coming to Washington in August, 1903, Steele taught school at Tenino near Olympia for eight months, and then having passed the State Bar examination, he opened his law office at Olympia in 1904, where he practiced his profession for over forty years.

Public spirited and interested in the development of his community, he served as a Director of the Olympia Chamber of Commerce three years and its President two years; elected Olympia City Commissioner of Finance he served seven years, and was appointed Mayor to replace the Mayor who passed away; he served two years in this position; elected State Senator from Thurston County in 1932, he served four years in the Washington State Senate with very considerable distinction.

In 1907 and continuing to this date, being so close to the Oyster operations around Olympia, Steele took a great interest in the practical growing of oysters and with it the scientific development and improvement of the industry. With his summer home on Oyster Bay, the large production area for the Native Olympia Oysters, his interest which might have been called a hobby, developed with the purchase of oyster acreage into a regular profitable business side line.

In 1912 he was elected Secretary of the Olympia Oyster Growers Association and held that office until 1941, over 35 years. Principally through his tireless efforts the advertising of the Olympia Oyster Growers Association developed the Pacific Coast demand for these succulent bivalves to the point where the entire available production was sold each year.

On December 25, 1917, Mr. Steele married Clara Ann Remdt in Findlay, Ohio, and their three children, now grown, with families of their own, are Margaret Ann, Richard N., and Bonny Jean. Richard N. and Margaret's husband, Marshall Hinton, now operate the Rock Point Oyster Company's plant.

In 1930, it was through his efforts the Pacific Coast Oyster Growers Association was formed. He was president and secretary until 1945, and a Trustee for several years afterwards, as well as a valued consultant to date.

Beginning with the scientific study of the propagation of the Native Olympia Oyster and since early in 1920 pioneering the importation of Japanese transplanted oysters, now known to the trade as the Pacific Oyster, and engaging in the culture of this species for these many years, it goes without saying that Earl Newell Steele, known to all of us as the Daddy of the Pacific Oyster Industry, after fifty five years, should have a whole book full of interest, information, and observations on oysters for the permanent record.

In 1957, the Olympia Oyster Growers Association published Steele's book "The Rise and Decline of the Olympia Oyster". A story of men's lives, the life of the oyster which they cultivated, and the Olympia Oyster industry.

Personal and most agreeable contacts over the years since 1924 makes me welcome this opportunity to salute "E. N." and I feel deeply honored to be asked to provide this foreword.

CHARLES R. POLLOCK  
Seattle, May 1, 1962

# **The Immigrant Oyster (*Ostrea Gigas*) Now Known as the Pacific Oyster**

## **INTRODUCTION**

Before beginning the history of the Pacific Oyster, its birth as an industry, its rise and expansion, I should set out a few general remarks pertaining to oysters.

In the words of that noted poet, the late Carlton Fitchett, of the Seattle Post-Intelligencer:

"The oyster plays a useful role because he's edible,  
The way he side steps birth-control is nothing but incredible.  
The sons and daughters he begets are numbered by the myriad,  
They're known as spats the little brats, throughout their baby period.  
The way he multiplies his kind he merits no apologist,  
And keeping track would wreck the mind of any genealogist.  
Of course as parents do, he likes his kiddies, sad or humorous,  
But he can't name the little tykes, because they're far too numerous."

What is an oyster?

I have heard many different definitions. Many people from the interior, who have not been to the sea coast, have little idea as to how an oyster or an oyster bed looks.

A little girl was asked by her teacher for a definition of an oyster. Her answer was, "It looks like a fish with a shell on it".

Some writers have put their ideas in print.

Mr. Doug Welch, in an article appearing in the Seattle Post-Intelligencer on the subject "Oysters in a Stew; It's a Sex Problem," said in part:

"In the spring a young oyster's fancy turns lightly toward thoughts of love-and about one hundred twenty million offspring each.

"But along about this time of year, when fall spreads its soft mantle everywhere, a young oyster spends most of his time wondering whether he is (1) a little boy oyster, or (2) a little girl oyster.

"He never knows, when he arises in the morning, whether he ought to slip into trousers or into a silk print dress.

"With the oysters, says Zoology Professor Trevor Kincaid of the University of Washington, it's strictly a case of Dr. Jekyll and Mrs. Hyde. This is particularly true of the native oyster, which is bisexual. Last spring these little fellows were sitting around talking baseball and and politics. Now they're all knitting on tiny garments. Come winter, and they'll slip into a comfortable state of quietude in which they're neither Ned nor Nancy.



"The Japanese oyster, on the other hand, may be either a male or female for several years running. But the males invariably turn into females along about the fourth year and there is nothing they can do about it. Struggle as they may against it, sooner or later they all appear in public with roses in their teeth.

"There is a terrific mortality among young oysters. Some float out to sea as larvae, some fail to find a shell to attach to, some are eaten by jellyfish and some are eaten by their own parents.

There are many kinds, shapes and sizes of oysters in other parts of the world. On the Pacific Coast there are but two specie. The very small Olympia Oyster (*Ostrea Lurida*), which acquired its name from the City of Olympia, Capitol City of the State of Washington. It requires from 2,000 to 2,500 oysters to make a gallon of opened meats.

It is a very delicate oyster and to produce them commercially they must be protected from the heat of the summer and the cold of the winter, by about six inches of water, retained when the tide is out, by a system of dykes.

This author has published a book entitled "The Rise and Decline of the Olympia Oyster". Therefore, I will not go further at this time into that subject more than to say that the Pacific Oyster is indigenous to Japanese waters. It is a large oyster and the meats of the average marketable oyster, average from 60 to 180 oysters to the gallon. It is for this reason it is called "*Ostrea Gigas*", meaning a large oyster.

The Washington Department of Fisheries in 1957 re-printed an article by biologist Charles E. Woleke entitled "The Quality of Seed Oysters From Japan." It can be secured through the Washington State Department of Fisheries, Vol.2, No. 1, June, 1957. I quote from page one in part, as follows:

"Significant commercial production began about 1928 with the importation of 8,000 cases of seed. Limited reproduction occurs annually in several areas in Washington and British Columbia (Chapman & Esveldt, 1943; Elsey, 1933; Kincaid, 1951) but for various reasons does not provide the seed stock necessary for large scale oystering. The problem of restocking beds with the quantity of oyster seed necessary for continued growth and economic health in the industry has been solved by developing one of the most unique aqua-cultures in the world. Each year since inception (excepting the war years of 1942-1946) oyster seed produced in Japan has been purchased by the American oyster growers.

His article contains much information and valuable statistics taken from his experimental work. However, much of this subject matter is covered later and I shall not quote further at this time.

My purpose in writing this book is to respond to the request of many friends who feel that my close connection with the entire history of the "Pacific Oyster" qualifies me to write a story covering the entire period from its birth to the present time.

This writer has great confidence in the younger members already engaged in the industry, and those who will be engaged in the industry later. They will go much further with it than we have.

However, I believe that there will be information in this book that will be helpful to them. I do not advocate looking backward too much. To the contrary, it is of use to us somewhat like the little mirror in the automobile - it's there to give us a quick glance at the road behind in order that we might better navigate the road that goes ahead.

I hope I may be pardoned for using the first person in many places throughout the book in relating my personal experience in matters which I have participated in. To that extent it must be autobiographical.

The Pacific Oyster (*Ostrea Gigas*) is a transplant oyster from Japanese waters. I shall not review its history in Japan further than it applies to seed oysters transplanted into our waters. I will include my knowledge of its history and of transplanting on our coast, and the planting, harvesting, processing and marketing thereof. Also the formation of the Pacific Oyster Growers Association, which has for these many years been the lifeblood of the industry.

I was president of that organization for fifteen years and on the board of trustees for several more years.

I have preserved newspaper and magazine clippings, folders, circulars, and public documents. I have also had access, through the kindness of Charles R. Pollock, Secretary-Treasurer of the said association, to the minutes of all meetings and much of the official correspondence of said association, which has been the official representative of the industry for nearly 70 years. I have carefully reviewed these various sources of information. I have lived them over again as I have tried to produce a book stating substantially the facts in an accurate manner.

It also may be noted that no other living person can personally tell many of these facts; especially of the first and very important eight years when the Rock Point Oyster Company was the sole shipper of seed from Japan, grower of Pacific Oysters, and marketing the same.

Although the Pacific Oyster industry on the West Coast of Washington, Oregon, California, and Canada has become a vast industry, spread out over thousands of acres of tide flats and employing thousands of people, yet it is a young industry. It now supplies an important sea food to millions of people. It is not a native oyster. The only native oyster on the West Coast is the Olympia Oyster (*Ostrea Lurida*). The Pacific Oyster is a native of Japan.

The first Pacific Oysters brought to this country in commercial quantities was in the year 1919. The industry is now only 42 years old. Its early history is not known to many, and the growth of the industry has been very rapid and complex in its nature. Up to this date much has been written about the various phases of the industry, but no comprehensive history covering its origin and early development, chronologically recording the seeding, growing, processing, and marketing of the Pacific Oyster has ever been written.

This writer has been closely connected with the industry and participated in every phase of it from the beginning. He has been urged by many other oystermen and friends to prepare such an article.

## CHAPTER I

### AN OYSTER GOES ABROAD

In the summer of 1918 some unknown oysters located on some now unlocated oyster beds in the Miyagi Prefecture of Japan near Sendai, following the processes of nature in the propagation of its kind, released millions of microscopic eggs into the water. This created the necessary sex appeal that caused other millions of spermazoid to be released by the male oysters. Within a few hours thereafter these spermazoid fertilized the eggs. Life was produced; the embryo oyster swam around for about 18 days, using tiny cilia as motive power to push itself about. At the end of that time it had grown a thin shell, and by the use of a microscope could be identified as an oyster. Each oyster carried with it a bit of glue. At this time it had been developed to a point where it was ready to "set" by attaching itself to some object with which it came in contact. Being in Japan this naturally was bamboo which had been thrust into the tide flat by the Japanese oysterman. It was then known as an oyster "spat" or "seed".

This was in August or early September. Immediately it began to grow and was soon visible to the naked eye. By the time winter set in and during the winter the shell hardened but did not take on a rapid growth. The cooler water in the fall and winter is more or less a dormant period in the life of an oyster. By the first of April, 1919, it was from one-sixteenth to one-half of an inch in diameter.

These particular oysters I am telling you about were no different, so far as appearance is concerned~ than the millions of other surrounding oysters. Yet, they were different in this respect. They had a destiny. They, or a part of them, were to migrate to a foreign land, the United States of America.

At the same time all this was going on in Japan something was happening on the West Coast of the State of Washington. Two young Japanese men, by name of J. Emy Tsukimato and Joe Miyagi, were busy making plans which involved the destiny of these oyster seeds in Japan. These young men had both been residents of Olympia, Washington. They had both been educated and graduated in the public schools in Olympia. Joe had earned his way through school mostly by acting as house boy for one John C. Barnes and family in Olympia; whenever he had spare time he had worked as an opener for the J. J. Brenner Oyster Company. J. Emy Tsukimato, commonly known as "Emy", had earned his way through school by opening Olympia Oysters. Both boys had worked with oysters on the beds on Oyster Bay near Olympia during summer vacations. This writer knew both of them very well.

They had not been out of school long until they began to have dreams of transplanting oysters from their native land to the waters of Puget Sound. Being familiar with the conditions both in Japan and in Puget

Sound they felt that such transportation would be successful. They secured information concerning water temperatures, salinity of the water and other things pertaining to the requirements of oysters both from Japan and in Puget Sound. They knew that the food supply for oysters was abundant in Puget Sound from their own experience with the Olympia Oyster. From all information gathered they concluded that they would go ahead and bring over a sufficient quantity of seed to make it not only an experimental test but sufficient to start the development of an industry.

During several summers, Joe and Emy made a study of the oyster land both in Puget Sound and other bays such as Quilcene Bay, Samish Bay, and Willapa Harbor. Naturally, they were limited to areas where Olympia Oysters did not exist. After this study was completed they decided that Samish Bay, near Blanchard, Washington, about sixteen miles south of Bellingham, was the most suitable place. The Pearl Oyster Company owned approximately 600 acres upon which they had previously grown Olympia Oysters. Next these boys organized a company to join them in this venture. Mr. M. Yamagimachi, who was a partner in the Jackson Fish Company of Seattle, who operated a retail store and handled sea foods, was first to join them. Then five others joined. This made a total of eight in the

company. They elected J. Emy Tsukimato as president of their partnership. By this means a sufficient amount of money was raised to pay for 400 cases of seed from Japan, and to buy the 600 acres of oyster land from the Pearl Oyster Company. They made a down payment and entered into a contract to purchase. A case of seed means a box of a certain size and shape suitable for export use, and holds about 2 bushels.

The seed was purchased and packed by the Japanese Oyster growers. It was then placed on racks which were covered at high tide and left until they had become thoroughly soaked. They were then placed on deck of an American ship, the President McKinley, covered over with Japanese matting, and watered down with sea water to keep them cool during the voyage. During the voyage, which took approximately 16 days, they were kept drain by pumping sea water over the matting. Thus, these oysters became immigrants. They had to pass inspection before entry, by the United States Custom officers in Seattle. The oyster seed was then taken by scow to Samish Bay and scattered or planted on the oyster beds they had purchased. The oysters began to grow rapidly within a few days after they were placed in the water. This indicated that the waters were suitable and the oyster food plentiful. Their new home proved to be to their liking, for as they developed they became fat and had a delicious flavor, even surpassing both in growth and flavor the oysters from their native beds in Japan. Said one little oyster to another, "I believe we are going to like this country."

And so this industry was born. Little did either the oysters or those who participated in the activities know or even dream of the extent to which the industry would grow. That is the story I am now about to tell.

### **Previous Experimental Work in Japan**

The above relates the story of the first Japanese oysters successfully transplanted to the United States in commercial quantity. However, previous experimental work had been done by others in Japan. The history thereof is incomplete. References made by authoritative sources in this country are indefinite and in some instances conflicting.

Bureau of Fisheries Document No.1066 entitled "Oyster Industry of the Pacific Coast of the United States" by Paul S. Galtsoff, Ph.D., published in 1929, makes some reference to this early history. It states that in 1899 the question of importing Japanese oysters was taken up by the United States Fish Commissioners with the Imperial University of Tokyo, who answered that the oysters from the beds at Akkeshi Hokkaido, the northern island, would be best adapted for transplanting to America. It is stated further that in 1905 a group of Japanese planted seed from Japan and planted it in Samish Bay near Bellingham. Further that their efforts were successful, for the seed grew well. "Subsequent to the passage by a State Legislature of a law (1922) restricting the ownership of lands by aliens, the Japanese Company was forced out of business, and their Samish Bay oyster lands and plant passed into the hands . . . known as Rock Point Oyster Company, which has cautioned business on a much larger scale."

It is quite obvious that these remarks refer to the planting of seed by J. Emy Tsukimoto and Joe Miyagi as herein related, and that the writer was in error as to the date.

More complete information has recently come to the attention of this writer. For this I am indebted to my good friend, Charles E. Woelke, Fisheries Biologist for the State of Washington. It is a copy of an article written by Dr. Hon, Tokyo Imperial Fisheries College, dated April, 1947, entitled "History of Transplantations of Japanese Oysters to the United States". He states that in 1899 Dr. K. Mitsukuri, Professor of the Tokyo Imperial University, received a letter from Dr. H. M. Smith, Fish Commissioner of the U. S. A., inquiring what oysters from Japan would be most available for transplanting if exported to the American waters. Dr. Mitsukuri recommended those from Akkeshi Bay, Hokkaido.

In 1902 and 1903 about 500 cases of Hiroshima oysters were exported to Bellingham, Washington, from Kobe by Kanai, an oyster grower in Hiroshima, by order of an American in Kobe. The result was not successful on account

of great mortality on the way.

In 1906-1907 a small quantity of Chiba oysters (Tokyo Bay). The results were unsuccessful. Details not known.

In 1907-1908 Hiroshima three year old oysters transplanted to Poulsbo, in Puget Sound, by the Imperial Fisheries Institute (now the Tokyo College of Fisheries). As the oysters had been specially selected for export the results were better.

In 1909 the Imperial Fisheries Institute established an oyster farm at Kanazawa near Yokohama to cultivate oysters suitable for export. Oysters cultured at this farm were transferred to Hawaii and Seattle from February to April, 1912. The results were generally good.

From 1912 to 1917 several small trial shipments of oysters were made with the conclusions that much depended on the time of year the shipments were made.

From 1917 to 1920 oysters were shipped each year. The quantities are given in number of oysters. Nothing is said about seed, and it is a fair conclusion that the Japanese were trying to develop an export shell oyster for half shell trade in America.

Dr. Hon then relates the activities of Mr. Joe Miyagi and Mr. J. Tsukimoto. To quote: "He started oyster culture at Natanoha (Miyagi Prefecture) and Kanazawa with the support of the Fisheries Institute. He exported oysters produced in various districts of Japan to Samish Bay (this bay was assigned to Rock Point Oyster Company afterwards) where Mr. Tsukimoto established a farm to cultivate Japanese oysters."

"In April, 1919, about 400 cases of oysters produced in Miyagi Prefecture were shipped in a batch from Yokohama. They were large in size with small spats attached on their shell, but did not notice this fact as the spats were very small. When they arrived in Samish Bay, unfortunately, almost all the larger ones were dead. They were spread on the ground without any expectation. A few months later to their surprise, the workers found that there were many young oysters growing on the ground where the dead oysters had been scattered. They perceived, no doubt, that these young oysters had been growing from the small spats attached on the dead shells."

"After these experiments and failures, it was proved that the oyster seeds produced in Miyagi Prefecture were the most superior in growth and that the small spats attached on dead shells were most suitable for transplanting."

These experimental shipments of oysters from Japan were evidently carried on by the Japanese quietly and with little attention being given to it in this country. This writer had been closely connected with Olympia oyster culture since 1905 and had never heard of it. After I became interested in it I made inquiry and learned that some large Japanese oysters in the shell had in the early days arrived in Seattle, but that they were dead. They probably were condemned and destroyed. Others spoken of by Dr. Horie were large oysters. Those that may have lived were used in the half shell market. Whatever the facts are, their entry and disposal was of no significance in the oyster markets. However, it is probably that Joe Miyagi and J. Emy Tsukimoto were in close touch with these activities in Japan, knew the results and were able to profit from the failures.

### **What Were the Lessons Learned**

First: That results depend upon the time of shipment. Early spring shipments were the best. So the first shipment made by these Japanese boys was in April.

Since that time this fact has been verified many times. Whenever seed oysters have been transplanted in the fall,

whether from Japan or from one location to another locally, the results have been unsatisfactory. Seed oysters are so delicate that they must winter under the same environment as when born. During the first winter the shell hardens and biological changes take place. When the spring growth starts they seem to have attained a hardness and vigor making them able to withstand these changes, as well as being out of the water during shipping.

Second: That larger oysters will not survive shipment, especially requiring the time taken from Japan. This also has been proven many times since then. The smaller the seed the less the mortality. In each shipment of seed, although many are so small they can hardly be seen by the naked eye, there are some perhaps an inch or more in diameter. The death rate among the larger ones is much greater than the tiny seeds.

Evidently the Japanese boys believed that with the shipping experience and knowledge as to the best time to ship oysters, they could be successful even though previous shipments had not been satisfactory. Dr. Hon states that the entire shipment was thought to be only large oysters, and the discovery of small seed on the shells of the dead oysters was made after planting. That is news to me, and contrary to my recollection. The oysters were quite large when I first saw them and that has been over thirty-eight years. Dr. Hon probably has some records or was a personal observer, so I yield to his statement. Whatever the facts it was most fortunate, for it established the fact that small seed was best adapted to long shipment, and survived best in our waters.

There was one fact, however, that had not been established. What part of Japanese waters produced oysters that would thrive in our waters and produce an oyster that would be commercially profitable. There are many different species of oysters grown in Japan. Most of them have been tried in our waters. This species (*Ostrea Gigas*) meets all requirements better than any other. So it was a most fortunate happenstance that the bulk of this first shipment were *Ostrea Gigas*, from Miyagi Prefecture.

The question may be asked, "What difference would that make?" A good question, for its answer would solve many problems. If oystermen knew why oysters can or cannot be successfully transplanted from certain oyster growing areas to other waters it would save years of costly experimental work. The truth is that the oyster itself must tell its own story. To my knowledge no accredited authority has ever written on this subject. The reason must be in the difference in the component parts of the water comprising the natural habitat of the oyster, and of the waters to which it is moved: The mineral content; the salinity of the water; the depth of the water, or the natural oyster food contained in the water. The oyster may or may not be able to tolerate the difference. It and it only can tell you. If it can, it thrives. If not it becomes poor and dies. He who desires to know must use the trial and error method and accept results as an answer.

For instance, in the early part of the century car load shipments of Eastern oysters (*Ostrea Virginica*) were brought from different oyster areas on the east coast and planted first in San Francisco Bay, California, and later in Willapa Bay and Puget Sound waters. At first small oysters were tried with a hope that western growers might profit by the growth. The mortality was too great. Before they grew to maturity most of them died. Then large oysters were brought in, using our waters as holding waters and disposing of them for half shell oysters soon after arrival. This seemed profitable for a time and many carloads were used. Many oysters died before they would be marketed, losses became apparent, the oysters failed to propagate in commercial quantities, and the industry declined as rapidly as it had risen, resulting in heavy losses.

This failure might be attributed to differences between Atlantic Ocean and Pacific Ocean waters. The answer is not that easy. Even in the waters of Puget Sound it has taken years of trial and error methods to find out that the Olympia oyster (*Ostrea Lurida*) may be moved successfully between Oakland Bay, Oyster Bay, Mud Bay, Little Skookum, and North or South Bay. In fact, between any of the inlets of southern Puget Sound. Yet the same species grown in Hoods Canal on the Clifton State Oyster Reserves failed to transplant successfully either in Oyster Bay or Mud Bay, only a few miles away, even though transplanted under most favorable conditions. Personally I have without success moved the same species of oyster from Ladysmith, British Columbia, from Hoods Canal and Oyster Bay to natural

beds in Samish Bay, northern Puget Sound near Bellingham.

At the present time on the east coast similar efforts are being made to find out whether seed may be successfully transplanted from Virginia and Louisiana beds to northern areas that have been depleted by storms or other causes. They have the assistance of the best oyster biologists and laboratories. They still must let the oyster itself give its own answer.

A part of these facts were known to me at the time George Yoshihara first told me about the shipment of oysters from Japan by J. Emy Tsukimoto and Joe Miyagi. I had already experienced unsuccessful transplanting in our own waters. What kind of an oyster was this that could endure the long voyage from Japan, some twenty days in transit, and live? If they did survive the voyage could it still be that they would live and grow in our waters where water conditions, climate and oyster food might be entirely different from their natural habitat?

Then he showed me some sample, both of the seed (samples had been retained) when it arrived and of live oysters just taken from the beds. My interest became alive. The dead seed was so small it could scarcely be seen. They had been planted in April, 1919. This was in the spring of 1921. The oysters had grown in two years to a length of about six inches. It seemed incredible. Yet, they may have hit the jack pot. I must see it on the beds. Arrangements were made, the observation was made. These facts seem to prove that these Japanese boys, previously from Olympia, Washington, J. Emy Tsukimoto and Joe Miyagi, successfully imported the first Pacific oyster seed to this country in commercial quantity.

What part of its success was due to their knowledge of the experimental work carried on in Japan, and what part to their own judgment is a matter of conjecture. They did ship the seed at the best time of year. It was packed in the proper type of container, a wooden box. It was shipped on deck where it could get air instead of the hold of the ship. Whether they knew the large oysters had small seeds attached or not is immaterial. Their judgment as to the place from which the seed was grown was correct. A large part of the seed shipped to this country since that time has been from Miyagi Prefecture. Whether they were smart, or lucky, or both, they succeeded, and are entitled to that acknowledgment. We owe them a vote of thanks.

The story of how the industry so born was carried on is of equal interest.

### **AMERICAN OWNERSHIP**

It was a beautiful morning on Samish Bay. The tide was low about sunrise. George Yoshihara, who worked for me on Oyster Bay, and a friend, John C. Barnes of Olympia, Washington, had gone to Blanchard the night before. There we had met and lodged with J. Emy Tsukimoto and family. Before daylight we had slipped into rubber boots and onto the oyster beds. A few hundred feet from shore we came into a heavily planted bed of oysters. We were taken to the outer, or western, edge of the bed. As we stood and looked to the east the sight was a beautiful one. It stands out in my memory to this day. The sun was just coming up over the mountain tops. Its light glittered over the oysters. They stood up in large clusters and the new growth, the lip of the oysters, transparent in the sunlight, appeared to be an inch long. I stood and looked in amazement. An examination of the oysters took place. The incoming tide drove us to shore.

On the way home we discussed the matter with enthusiasm. Mr. Barnes had been interested with me in the cultivation of Olympia oysters. The Olympia oyster being very small, the thought of growing an oyster the size of a New York count, the largest, most expensive and most popular oyster from the East coast, in three years or less was most interesting. The Olympia oyster took four to five years to become marketable. It took about 2500 oysters to make a gallon of oyster meats. In less time this new oyster apparently would average about 120 oysters to the

gallon of meats. We realized that the Olympia oyster was a popular but a much higher priced oyster, and the cost of growing it was greater. It would continue to supply its special markets. This oyster would gradually take the markets being supplied by the eastern oyster. We knew that increased express rates were causing decreased shipments. We knew the wholesalers who had, especially during the Christmas season, shipped carload lots had at times sustained heavy losses by spoilage. Would not the markets be greatly expanded by having a large sized fresh oyster, grown in our backyard, so to speak, available at the same or a lower price?

These problems, and many more, became a challenge to us.

The Legislature of the State of Washington during its session in 1921 passed what is known as the anti-alien law which appears in the Session Laws of 1921 on page 157, Section 2. This law prevented the ownership, or leasing, of land in the United States by an alien, which would prevent the ownership by these Japanese people, of the land which they had purchased on contract at Samish Bay.

This took from the Japanese their interest in further activities. If they could not own or lease land they could not grow and sell the oysters. At the same time, the Japanese had become very unpopular on the West Coast and these boys were discouraged to the point where they wanted to dispose of their interest in the land and sell the oysters planted thereon. The trip to Samish Bay, as before related, was the result.

It was then the spring of 1922. Mr. Barnes and I were so much interested that we took up negotiations for its purchase. We went up there several times to inspect the oysters and had meetings with the Japanese in Seattle for negotiations. We arrived at a price for the oysters and the business. They released their contract to purchase from the Pearl Oyster Company who in turn entered into a contract with us under which we purchased the oyster land, about six hundred acres. I have a written memorandum, dated May 18, 1923, which reads as follows:

"After several trips, covering a period of nearly two years, Mr. J. C. Barnes and I bought this business on May 18, 1923. Took charge at once leaving Oashi in charge."

We made arrangements with Mr. Emy to go back to Japan and supply us with seed. On June 1, 1923, my memorandum states that we went to Seattle to see Emy off for Japan. Further, on that date, that Mr. E. G. Brenner and Mr. Ginder, of Olympia, made an inspection of the oyster beds at Blanchard. In August Professor Kincaid and wife visited the beds and Professor Kincaid became very much interested in this specie of oysters and the manner in which they had become adapted to our waters. In September of that year, 1923, the oysters had developed to a point where we felt marketing should begin. Mr. Barnes took active charge of the beds and I undertook development of the markets.

It did not take long to find out that the public was very antagonistic to anything from Japan. We decided that we must give this oyster a name which did not indicate or connect it with the Japanese. At a point directly east of the oyster beds here was protruding out beyond the shoreline a great rock point. This has since been cut through by Highway Alternate No.99. We decided to call our company the Rock Point Oyster Company and to use that as a brand. We secured a trade mark and the company has been known by that name to this day.





E.N. Steele  
The Author and Pioneer Oysterman

## CHAPTER II AN OYSTER BECOMES NATURALIZED

As sales manager of the Rock Point Oyster Co., I started out. Bellingham being the first city, because of its nearness to our operation, was covered with some success. Then I ventured into Seattle.

I had been a grower of Olympia oysters for almost twenty years and had sold many hundreds of sacks of Olympia oysters to the Haines Oyster Co., who were the oldest established wholesale firm in Seattle. Earnest J. Whitman was manager of that company. In discussing the problems connected with the sale of oysters, both the Olympia oyster and the Eastern oyster, he had previously told me about some of the difficulties connected with the sale and marketing of Eastern oysters which were the only large oysters sold on the Pacific Coast. His customers liked them, and they were popular with the oyster consuming public, probably because a large percent of the people of Seattle at that time were from the East. However, as a wholesaler, he had experienced many difficulties. If ordered in small quantities, and shipped by express, the express rates were so high that to make a profit he had to charge a high price for the oysters. The refrigeration consisting or re-icing in transit, was often very poor and the oysters deteriorated before arriving in Seattle. If the weather was warm it resulted in heavy losses by reason of spoilage. During the Holidays a group of Seattle wholesalers had shipped to them from the East two or three carloads of opened oysters. Transportation cost was thus reduced, but the time the oysters were in transit was increased, so the oysters were old when they arrived. The desire to dispose of them quickly before spoilage had caused price wars between the wholesalers and in the markets, causing an actual loss on the venture.

For these and other reasons Mr. Whitman had become discouraged with the Eastern oyster business. For these reasons he was the first that I contacted in Seattle, and the Haines Oyster Co. became the first to handle the Pacific oyster in Seattle.

With a quantity of samples of oysters, both in the shell and open stock, I met him at his office by appointment. He considered the matter with much enthusiasm. From his standpoint, he pointed out, there would be much advantage in selling an oyster which was grown practically in his back yard rather than three thousand miles away. Thus he would receive the same service that he was having with Olympia oysters. He could daily place his orders to meet his needs and deliver them to his customers. The oysters would be fresh, practically from the oyster beds to the table. Heavy express costs would be eliminated. Although our price was approximately five dollars per gallon in small ready to use containers, yet they compared favorably with the cost of good quality Eastern oysters. The size of the oyster was even larger than the "New York Count."

That evening we had an appointment with Mr. Don Ehle, proprietor and owner of two popular seafood eating places in Seattle, "Don's Seafood" and "Don's Oyster House." We were to furnish the oysters and his chef was to prepare them. This appointment was carried out. We had oyster cocktail, oyster stew, and fried oysters. We all, as well as some of the waiters and the chef, participated. This was followed by a long discussion as to how they should be introduced to his trade. He realized that his customers were accustomed to the Eastern oyster and might be prejudiced against a new and untried oyster. He felt that the oyster was equal to the Eastern oyster in flavor and ality and that there was a great advantage in having them fresh. He gave us an order and agreed to attach to his menu a "Special for the Day", recommending Rock Point Oysters, and playing up the qualities of freshness, size and flavor. We sat and discussed the matter until a late hour, and left with a feeling that our first order was a real foundation for our future business.

This procedure was followed through day after day for several months. Our second appointment was with Mr. Rippe, owner and proprietor of "Rippe's Cafe", then "Manca's Cafe", Mason Blanc", "Edhart's Cafe", the "Seattle Hotel", the "Gowman Hotel", and many other restaurants and cafes that served oysters. Each one, in turn, had their

objections and had to be shown that their business would be increased by making the change. These Seattle customers required a lot of attention for a long time. As some of them had predicted, many customers objected to them for various reasons and insisted upon receiving Eastern oysters. At times it became very discouraging, but as time went on and they became accustomed to the Pacific oysters the quantity used began to increase. Several of those above mentioned persisted in their effort to use the Pacific oyster and discontinue the use of Eastern oysters. Several of them continued to be dependable customers as long as they remained in business.

During this same period of time, Mr. Whitman and myself devoted much time to development of the fish market trade and in fact all retail stores where oysters were sold. We had containers of various sizes, gallons, half gallons, quarts, pints and half pints, beautifully lithographed. However, we found, as we had among the restaurants, a resistance by the public to the use of this new oyster. One objection was that it had a dark rim, which they thought indicated something wrong with the oyster. We resisted this by advertising "Look for the oyster with the velvet rim. It assures you that it is grown in the pure waters of Puget Sound, and that it is fresh. It has a velvet rim the same as the Olympia Oysters."

My father, J. M. Steele, and a demonstrator speeded up the introduction of the oysters and laid the foundation for public consumption. They arranged with markets to prepare and serve to interested customers a cracker sandwich. The oysters were prepared and fried, then placed between the crackers. This was so favorably received that it greatly increased the sales of the markets. A quantity of oysters in containers were always on display. This was done in Seattle, Bellingham and Tacoma. If my memory serves me right Sam Buldis (National Fish Market), was the first, and then the Marush Sea Food Market, in Tacoma. In Bellingham Henry Bornstein (Bornstein FishMarket) and the late John Dermos (Bellingham Fish Market) . We considered the results very satisfactory. Many thousands of gallons of Rock Point, or Pacific oysters of whatever brand, have been sold in those markets since that time.

The first season our markets were practically limited to Bellingham, Everett, Seattle and Tacoma. Many of our customers preferred to purchase the oysters in the shell and open them as they were served. This proved popular and the first year we sold 46,975 select oysters in the shell at 3 1/2 cents each, and 303 1/2 gallons of opened oysters at an average price of \$4.00 per gallon. This quantity was small in comparison with later days but proved to be a solid foundation for future market development.

In the meantime J. Emy Tsukimoto, whom we had sent to Japan to look after the securing of dependable seed, was carrying on experimental work to determine the best type of cultch to be used, taking into consideration the number of seed oysters per case and the seed most suitable for exporting. He had been connected with the Olympia oyster industry where the best seed was caught in dykes. He leased some land and constructed a dyke by the use of stone. The bottoms there are rather muddy so the land had to be hardened by the use of gravel. He covered the bed with shell, but his set was not satisfactory. I made the following entry in my memorandum records, dated October 25, 1923:

"Emy went to Sendai July 8. Spent two weeks in observation. Leased 80 acres seed land. Put out about 5000 bushels shell on July 22. He sent us samples which arrived here October 10, 1923, taken from beds about September 22, two months after placed in the water."

The dyke before mentioned was constructed on a portion of his leased land and the shells spread inside the dyke. On other parts of the land he constructed some racks. On these he hung rope covered with pitch and tar, fish net dipped in cement, and matting dipped in cement.

The established practice in Japan was to stick bamboo limbs about six feet in length into the soft oyster bottom in a manner that they sloped to a common point at the top. They were then tied together at the top. This made it look

something like a small wigwam. Cherry tree branches were used in the same manner. The seed would settle and catch onto the limbs in great numbers. Mr. Emy, as we called him, prepared a considerable quantity of this type of seed catcher.

In the spring of 1924 he shipped to us 492 cases of seed caught on these various types of cultch. It was received and planted in April and a study was made to determine which type suited our needs best. I again quote from my memorandum:

"May 1, 1924. We received 277 boxes of seed via 'Hawaii Maru', which left Japan March 30, 1924, and arrived in Seattle April 12, 10 p.m. Loaded it on Carrie Davis tug boat 'Deep Sea' which left Seattle at midnight and arrived at 1 p.m., April 13. Unloaded that afternoon. Second shipment 215 boxes which left Japan via 'Africa Maru' on April 9, and arrived in Seattle April 22, at 5 p.m. Same transportation to Samish Bay. Arrived at 9 a.m. Scattered on beds next morning, April 24. First shipment consisted of 50 boxes oyster shells, 10 boxes mussel shells, 50 boxes bamboo, 167 boxes of one and two year old oysters. All cultch including oysters well covered with very small seed. Second shipment contained 90 boxes cherry boughs, 2 boxes matting covered with cement, 10 boxes of oyster shells. Balance 1, 2 and 3 year old oysters with small seed attached. Remarks: Bamboo had some loss through rubbing in transit. Large oysters about 20% loss, small oysters not over 5% loss. We were informed by J. Emy Tsukimoto and Joe Miyagi that seed oysters were packed the same day as shipped."

Quoting further, "Boxes were 32" x 18" x 9" -3 cubic feet. Box holds 2.4 bushel. Weight, brush and bamboo, about 100 pounds, shell 150 pounds. Some wrapped in matting but could not see any benefit. All were deck shipment and came through cool and in good shape. Spread about 100 boxes to the acre.

Price: \$4.00 F.O.B. Yokohama. Freight \$10.00 per ton plus wharfage and consular fee at Yokohama. From Seattle to Samish \$125.00 per trip. Frank P. Dow Co., of Seattle, brokers. Total cost after spreading \$6.37 per box. Oysters out of the water 15 or 16 days."

We observed the seed after planting very frequently. Almost immediately it began to grow. The mortality was very little. There was no question but that the seed caught on the bamboo and the brush was very heavy in numbers, and a box of that type of seed contained many more oysters than the type caught on shell. However, we were not in a position to suspend the rope or the netting from floats or racks during the time necessary to produce mature oysters, as was the practice in Japan. We also found difficulties in holding the bamboo and the brush seed in place. The storms moved it around and sometimes carried it far away. The shell, however, with the seed attached, held their place on the oyster beds and we felt that it would make the most satisfactory cultch if a plan could be worked out to hold it in suspension while the seed was being caught in Japan, the same as the rope and netting had been. In other words, it would then catch a more plentiful number of seed. We decided to give the matter further consideration before the next shipment of seed.

I still have samples from each type of seed as it was from the first seed the birth of the industry. I value them highly.

My notes further show that there was an extra experimental 10 cases of seed shipped below deck, and without charge. This was because Emy had trouble in securing transportation with deck shipments because it was objectionable to the passengers. In those days we considered shipping on a freight boat too slow, and the President Line was strictly a passenger ship line. They wanted him to ship the oysters in the hold of the boat. The oysters in these 10 cases were more than 50% dead. Later we experimented by placing several boxes of seed in refrigerated rooms. This was more successful, but the loss much heavier than deck shipment.

In the fall of 1924, it appearing that the growth of the seed, no matter what type of cultch had been used was good,

we decided that our production of oysters would increase very rapidly. The next matter of concern was the development of our markets.

I have already explained our efforts in the Tacoma, Seattle, Bellingham and Everett markets and the resistance encountered in many quarters to this new large oyster in competition with the Eastern oyster. The Pacific oyster had a dark rim and different appearance and -flavor. Many of our inhabitants were from the East and were connoisseurs of the Eastern oyster. The new oyster had been publicized by others, as the "Japanese" oyster, which was probably the most serious objection of all.

In the Fall of 1925 we extended the methods which we had used the year before. My father, J. M. Steele, and a helper continued demonstrations in the cities we had demonstrated in the year before. My brother, C. H. Steele and his wife started demonstration in the Portland markets. The equipment used was a three-burner electric plate, a large tray with crackers, salt and pepper, and some celery salt. The equipment was usually placed close to shelves or a counter where a display was shown of the different size containers used in packing the oysters. Also a quantity of live oysters and of opened shell. The shell would be given to the customer together with a tried oyster made into a cracker sandwich. There was also a stack of containers ready for sale. Many of those who liked the sample would purchase a can of oysters, and was assured that this market would keep a supply on hand for their future use. Each one was also given a recipe folder which we had, with the assistance of the Home Economics Department of the University of Washington, prepared and had printed. The demonstrator was asked many question about cooking the oysters, which she answered. People were so interested that at times a considerable crowd would gather around. My brother was well versed in the culture of oysters and was prepared to give them a word picture of the manner in which oysters were grown, harvested and prepared for market. After about two weeks of demonstration in Portland the markets were pretty well established. In one day the counter sales in the Portland Fish Market amounted to 180.00, the half-pint size selling for 35 cents and the pint size for 65 cents.

The next move was to Corvallis, Oregon, then Salem, Eugene and other Oregon cities. The same methods of advertising were used with the same results. During the rest of that season demonstrations were carried on in most of the larger cities as far south as San Francisco. The advertising material had been supplemented by painted shells, many thousands of which were given away and left on the counters where the oysters were sold. Also a velvet banner with suitable advertising matter was displayed in the markets and in many restaurants and hotels. These banners displayed also the insignia or trade mark of the Rock Point Oyster Company.

In the Fall of 1926 our company had built a body for a small Dodge truck, fitted up for the convenience of our demonstrators. It carried a complete demonstration outfit, advertising material, painted shells, and had adequate sleeping quarters. My brother and his wife Pearl, started out in this in September, going into eastern Washington and Idaho. This territory was virgin so far as oysters were concerned. One dealer said that he had never seen an oyster and did not know but what they grew on trees. Therefore the results were rather discouraging. However in Spokane they did open up a territory which thereafter developed quite rapidly. It has been one of the best oyster markets in the Inland Empire up to this time. The demonstrators then turned southward and covered the cities and towns as far as Salt Lake City, then encountered stormy weather and turned southwest to San Bernardino, California. The remainder of that season was spent visiting in some places for the second time the cities along the coast. In San Francisco they had especially good success. In one market they had such a crowd witnessing their demonstration that a policeman kept them in line and prevented them from jamming pedestrian traffic.

market both for Olympia oysters and Pacific oysters. Back in territorial days so-called wind-jammers came to Willapa Harbor, Samish Bay and other places with loaded vessels. For their return cargo they would drop into these bays where native oysters were plentiful and fill their boats with oysters. These they took back as ballast and disposed of them on the San Francisco markets. Later great quantities of Eastern oysters were sold on the San Francisco markets. They seemed to be willing to adopt the use of Pacific oysters and

did not raise as many objections as they did further north. Many of the same brokers and whole salers who started the use of Pacific oysters at that time have continued through the years, and are today among our biggest users of Pacific oysters on the coast. This is true also with Oakland, California, and other surrounding territory.

While success was experienced in some markets yet in others it was very discouraging. This was particularly true in Los Angeles where at that time there seemed to be a strong prejudice in favor of the Eastern oyster. Some of the large markets who refused to handle Pacifics for several years, later accepted them and have since become large user customers. One dealer gave a small order but when my brother later called upon him he said, "Well, I will pay you for these oysters but will ask you as a favor never to come in here to try to sell me any more."

This method of opening up new markets and pepping up those where demonstrations had previously been held was continued along the west coast until about 1929. There was hardly a market of any size along the coast that we had not called upon. The orders were very small in comparison with present day orders. Yet they were sufficient to dispose of our crops as they increased from year to year. Our prices were maintained. Each year I took a trip down the coast and made a good will call upon our customers. Everything looked rosy until the first crop of Pacific oysters from Willapa Bay and Willapa Harbor came onto the market.

Willapa Harbor contains vast areas of lands suitable for the growing of Pacific oysters. A special chapter will appear later covering the history of the Pacific oyster in that locality. So for the present discussion of the early markets I shall only touch upon it briefly. The first oysters planted there grew rapidly and yielded a large oyster in about eighteen months. Their first planting of seed was heavy. Anticipating that there were plenty of markets standing ready to buy their oysters at a good price, they had constructed large opening and packing plants. When they entered the markets they found that they could not readily sell the oysters except to the markets which we, the Rock Point Oyster Co., had established, and then only at reduced prices. The market price began to decline and it was not long until we were unable to spend the money necessary to continue our demonstrations. Within a year the prices declined to \$3.50 per gallon, then to \$3.00 per gallon, then to \$2.50 per gallon. At this point it became apparent that the supply of oysters had greatly exceeded the available markets; that oysters were being sold at a price below cost of production and that a crisis existed. This brought about something which has meant more to the Pacific oyster industry than any other one factor during its existence, to wit:-the getting together of the oyster growers and packers and the forming of an association which has been recognized from that time to the present date as the official representative of the Pacific oyster industry. The formation and development of that organization and its activities through the years will be the subject of another chapter. It was high time that the oystermen were getting together as an industry for it was only a short time before the hard times of the early 30's broke upon us and the price of oysters declined to around \$1.00 per gallon or less, at which price many oystermen were compelled to sell in order to secure sufficient cash with which to live.

The ending of this chapter is rather a dismal picture, yet it ends that part of the history of the Pacific oyster where the Rock Point Oyster Company was going it alone in the development of the markets as well as development of the methods of producing and shipping seed oysters from Japan. During this period of time the Pacific oyster, in spite of its being an immigrant from Japan, had been accepted as a naturalized citizen of this country. The western pioneer, in fact any pioneer, experiences many hardships. He opens up a country; later settlers, yes, even his own descendants, accept the results with little thought of the hardships that have been overcome; the lessons that have been learned.

Just as this is true with the upland farmer, so with the farmer of tide lands, the oyster grower. The lessons connected with seeding the ground, cultivation of the oysters, the harvesting, shucking and packing of the product, and last but not least, the opening and development of the markets, must be learned the hard way, the trial and error method. But every trial is meeting a challenge, and stimulates an interest in life. Those eight or nine years were busy but happy ones, and the results lead on to many years of associations with those who came into and helped expand the

industry. The associations have been most kind and have honored me by delegating many positions of trust which have enriched my life. They have brought me into close contact with every phase of the oyster industry, both here and on the East Coast.

## **CHAPTER III CULTIVATION AND HARVESTING OF OYSTERS**

### **Eastern Oysters**

The cultivation of the Pacific oyster is somewhat different than that of any other oyster grown in America.

On the East Coast the native oyster (*Ostrea virginica*) propagates and reseeds the beds. There is, relatively speaking, a small run out of tides. It varies from one and one-half feet in Chesapeake Bay to four feet in other localities. The oysters set in deeper water, and at the lowest tide very few if any oysters are exposed. The oysters set in water as deep as thirty five feet, although in many places in coves or bays the water is shallow enough that the oysters can be taken or harvested by the use of tongs. A set of tongs consists of two long handles, crossed at the lower end like a pair of shears. A basket on the lower end is made, one-half attached to each handle, with teeth so constructed that the oysterman or tonger can manipulate the upper end of the tongs in such a way that the teeth will close under the oyster, drawing them into the basket. Thus he is able to reach down, fill the basket, and land into his boat about one-half bushel of oysters. It is an operation which requires much skill, and is slow and laborious. Yet many thousands of bushels of oysters are harvested each year in this way.

Thousands of acres of "Oyster Rocks", as they are called, are located under the deeper water. These must be harvested by dredges. Some states will not permit dredging by power. In those waters oyster boats are used, propelled, while dredging, by sail. I have seen a great fleet of these anchored at Bivalve on the Chesapeake. Many of the oyster beds are from twenty to thirty miles from port. I was a guest aboard one of them. About daylight perhaps a hundred of these filed out of the harbor, propelled by engines. As they got out of the harbor each one headed off toward its own oyster beds, tide land which was leased from the State. Each lessee had his land marked by buoys. Upon arriving there the motors were stopped and the sails went up. The dredges went overboard, and the operation started.

The dredge is a wire mesh basket constructed on a frame. Its mouth is about three feet wide on the bottom side of which is a flat steel plate. This drags on the bottom. The mouth opening is immediately above the plate. A "bridle" is fastened to each side of the plate which is attached to a long rope or chain leading back to a boom and winch on the boat. As the boat swings into action the oysters are drawn into the basket, which holds from six to eight bushels of oysters. When full, it is hoisted and swung over the deck of the boat and dumped.

I have described this in detail, as this method of harvesting, known as dredging, will be often referred to later. Incidentally; the use of sails rather than other power is required as a conservation measure to prevent depletion of the beds. Engine power can be more readily controlled, and is more efficient. Little is done to Eastern oysters in the way of cultivation except to spread shell over the ground for the seeds to "catch" on.

### **Olympia Oysters**

On the West Coast the native oyster (*Ostrea lurida*), known as the "Olympia oyster" because the heart of the industry has always been in south Puget Sound, near Olympia, Washington, is cultivated and harvested in an entirely different way.

The tides vary along the Pacific Coast. In Puget Sound they range between a low tide of three feet below sea level and a high tide of over sixteen feet above sea level. The receding tides leave extensive areas of flats exposed. The native oyster inhabited these areas, although the heat of summer and the cold of winter often killed the oysters. To prevent this the pioneers conceived and developed an elaborate method of cultivation, by building a system of dikes,



holding pools of water approximately six inches in depth when the tide was out. The configuration of the land, the range of the tide, and the slope of the flats determined the shape of the pools and the number of levels or tiers used by each oysterman in his development. At times there are as many as five levels. The cultivation of the Olympia oyster consisted of much hard labor and expense in diking and grading the ground, and thereafter keeping the dikes in repair. In the spring the seed had to be moved from the seed ground to the dikes where they were to be grown and fattened for market. The pools from which the seed was moved then had to be covered with cultch where the seed would, in June or July, attach themselves. The cultch consisted of the shell of the native oyster bought from the shucking house in Olympia, or some other type of cultch such as egg case fillers dipped in cement, or lath or fish netting dipped in cement.

In the winter the tides are low at night. Harvesting is done at that time. The oysters must be loaded by hand onto scows. Then they are taken at high tide to the culling house where the marketable oysters are removed from the smaller oysters, which are put back on the beds to grow. It is all hand labor. An average oyster farm is from five to twenty acres. No dredges are used. A complete picture of the industry can be found in Document 1066, published about 1928 by the Bureau of Fisheries, entitled "Oyster Industry of the Pacific Coast of the United States". Also in the book, recently published by the Olympia Oyster Growers Association, of which I was the author. It is entitled the "Rise and Decline of the Olympia Oyster."

I have mentioned that there formerly had been Olympia oysters in Samish Bay. Back in territorial days it is a known fact that this bay was well stocked with them. They had been accumulating perhaps for centuries.

Finally they were discovered and made use of, not by our old pioneers as in Southern Puget Sound, but by the captains of schooners as cargo on their return voyage to San Francisco. It is a published fact that these schooners came north filled with cargo and returned with several tons of oysters, either from Willapa Bay or Samish Bay. These oysters would be sold in the San Francisco markets. A large business was developed, which soon diminished and disappeared after Washington became a state and these tide flats were ceded to the State by the Federal Government.

But it was too late then for the industry to survive. The temperature of these northern waters is cold and spawning and setting took place only in exceptionally warm years, so that the stock was not replenished regularly. The removal of the mature oysters reduced the chance of a good set. The schooners not only took the adult oysters but those of all ages, including seed. In a few years the oyster population was diminished to a point where it could not be restored. The Pearl Oyster Company endeavored to do so but failed. When J. Emy Tsukimoto and associates took over they introduced the diking system and, with the aid and assistance of George Yashihara of Olympia, put in a cement dike enclosing approximately one acre. When the Rock Point Oyster Company took over there were still a few scattered Olympia oysters over the vast flats of Samish Bay. Hoping that we still might succeed Mr. Barnes and I covered the diked area with shell. We had some set and cultivated them with care, but without success. Later summers were cold, and there was no further set. We then tried transplanting oysters from other places, but finally decided that the colder waters and lack of favorable conditions did not justify further efforts.

## CHAPTER IV PACIFIC OYSTER CULTURE

Mr. Barnes and I both knew these facts at the time we purchased the Samish Bay oyster beds and the oysters they had transplanted from Japan. But we did not know the problems involved in the cultivation, harvesting and marketing of this new oyster.

The Olympia oyster was native to these waters, and no concern need be given to securing seed in a far distant country, then overcoming the difficulties of transportation. I have narrated early experiences; other problems have developed through the years and will be related later.

Some of these problems developed quickly. The Pacific oyster was large and there often were many oyster seeds attached to one small shell, resulting in large clusters. This was found to be objectionable. The oysters were ill shaped. They were difficult to open. Those on the lower part of the cluster were unable to get their share of food from the water and were stunted in growth and had poor meat.

We found that this could be avoided by separating the oysters in the clusters. When the oysters were about half grown a person could strike the point of attachment of the oysters a sharp blow with a hammer and they would fall apart. This became a summer job. The seed was planted near the shore where it would be protected from the storms. When the time came for breaking clusters they were loaded with forks onto a scow, the clusters broken and the oysters planted on beds further out to grow and fatten until ready for market. This practice was followed for many years. It was later made unnecessary to a large extent by development of a process of breaking the shell upon which the seed had been caught into small pieces. In this way the size of the cluster would be reduced to an average of four oysters instead of fifteen or twenty.

At first taking up the oysters was similar in practice to that used in marketing Olympia oysters. We had a standard oyster scow thirty-two feet long by eight feet wide. Also a small boat about eighteen feet long with a four horsepower engine. The oysters would be removed from a spot, the size of the scow, when the tide was out, the oysters being thrown out on either side so they might be easily loaded on the scow when in place. A marker, a small slender tree made into a pole, sharpened at the large end, was set firmly into the tidal floor at two corners of this prepared spot. When the tide was in, the scow would be towed out and fastened to these poles. When the tide was again out, a workman went out and loaded the scow. Its capacity was seventy-five to one hundred bushels.

We soon found that in the winter this method had its problems. In Samish Bay the tide flats have a very gradual slope. The seed beds were relatively close to shore, but the marketable oysters were nearly a mile from shore. A cinder path had been made so that in good weather the workmen could easily walk out, but as the winter came on and there were heavy fogs it was found to be dangerous.

This fact was brought forcefully to my attention by a little experience I had. One night I went out with a workman, a Japanese named Oishi. The trip out was beautiful. The moonlight glimmered over the outgoing tide. It did seem like a long way out. I was used to the tides on Oyster Bay where they came in very fast and the oyster beds were close to shore. I was concerned as to how we could get in before the tide caught us.

It took Oishi longer than he expected, and the tide did not go out as far as indicated by the tide book. I later found this was not unusual in winter, as storms hold the tide back. In addition to that the weather had changed. It became overcast and then the fog began to settle. When we started in, the water was already to our knees. Oishi was very calm and deliberate. The water rose higher and higher on our boots. I floundered around and lost the path, making headway much slower. The light at the plant on shore could still be seen very dimly, but it looked to be ten miles

away. I wore hip boots. I stretched them up as high as I could, then I walked tip-toed, but still the water was very near the top. Knowing it to be impossible to swim in hip boots filled with water, I shouted at Oishi that I was about to remove my boots and swim ashore. In his calm way he said, "No, alright pretty soon, we ketch up pretty soon." So I struggled on. The tide flat started to rise gradually under our feet, and we finally arrived safely on shore.

Soon thereafter we secured a small house built on a log float and anchored it on the outer ground so that workmen could sleep and eat there and come in next day.

Later this float house was destroyed by a storm. We next acquired a larger boat with a cabin. It had a flat bottom so when the tide was out it settled on the tide -flat. The boat was fitted up with sleeping quarters, food and cooking utilities. This solved the problem for several years.

The next step in development of marketing was the oyster dredge. This will be covered later.

### **Shucking Plants**

When the Rock Point Oyster Company took over the oyster beds, the only opening of oysters had to take place on a rough table or bench in an old building that had been used by the Pearl Oyster Company, the former owner, when there were still some Olympia oysters in Samish Bay. These were soon reconstructed, and as the business grew we first added an addition, then we constructed a new building which was later added to and made to conform with the sanitary standard of the Department of Health. This period of development will be covered in a later chapter.

From these experiences we found that the cultivation and harvesting of the Pacific oyster differed in many respects from either the Eastern oyster or the Olympia oyster. New and difficult problems arose. We met them as best we could.

## CHAPTER V EXPERIMENTS IN ARTIFICIAL SEED SETTING

I wish to tell of two wonderful summers during the early history of the industry.

Dr. Trevor Kincaid, Professor Emeritus, Professor of Biology, at the University of Washington, spent the summers of 1924 and 1925 studying the problems connected with the Pacific oyster. He had studied and became a recognized authority on the Olympia oyster. He indicated to us his interest in spending his summer vacations at Samish Bay studying the Pacific oyster. We were happy to cooperate with him, so we made arrangements that he be a summer guest of the Rock Point Oyster Company. He stayed at the home of Mr. and Mrs. J. C. Barnes, which was near the plant and oyster beds on Chuckanut Drive.

We fixed up a little room at the plant to use as a laboratory. He brought down microscopes and other equipment. It was not long until he was busy as a bee. During low tides he was on the oyster beds. He always brought in a basket of samples, oysters, oyster food, moss and bottom growths of many kinds. We had lectures on every part of the anatomy of the oyster and the food that it ate. We learned that the diatom is a microscopic growth produced, as I remember it, by sunshine on the mud flats. Canned sunshine Dr. Kincaid called it. This in turn, is fed by other minute particles coming into the Bay with the fresh water streams. There are many kinds of diatoms. When examined under a microscope one is amazed to see the beautiful shapes, as beautiful as the flowers in your garden. When examining them, Dr. Kincaid's face would light up. In excitement he would say: "I have found a new one; I have never seen one like this before". He would get out his books and begin to classify it. What a genius. Among all the hundreds of these tiny invisible creatures to be able to recognize them and give the scientific name which I could neither spell nor pronounce.

The subject which interested him most was the establishment of a hatchery for the rearing of the oyster larvae under artificially controlled conditions, and thus stabilize the industry by producing our own seed. He realized even better than we the difficulties and expense we would have if we always had to import seed from Japan. He was most ingenious in developing his equipment.

Up to that time there had been no natural set of seed. The oysters spawned, but evidently the water was too cold for a set to take place. One day we were standing on a sink float in which adult oysters had been put. It was a very hot day and the water, warmed by coming over the beach, was just flooding over the oysters. Suddenly Dr. Kincaid became quite excited. "They are spawning. They are spawning," he exclaimed. As he pointed I looked. A stringy white substance was oozing out from many of the "The males!" "Spermatozoid. just watch a moment," he said. And as he spoke I saw a jet of white substance was forced by an oyster into the water with much dexterity; then another and another until the water running over the oysters became white as milk. "See, the females are now spawning" he said. Then he explained how the sperm of the male, when running over the female oysters, had a sex appeal, causing them to do their part in propagation of its kind. He ran and got a pail and filled it with water containing both elements. This was put in a large glass container and kept warm. At first nothing was visible, although we examined a drop under the microscope. It was alive with minute objects. The eggs were much larger than the sperm. The sperm by some force of nature was drawn to the eggs. Sometimes several of them would be attached to one egg. Apparently there was but one entry to the point of fertilization, and there was a struggle between them to get there first. But the instant fertilization took place the others disappeared.

In a few hours those in the large glass container (now called larvae) became visible when looking through it toward a bright light. As the hours went by they came to life. They first developed a number of cilia, or hairlike processes, which they used to propel themselves. They danced around in a lively fashion, reminding one of some of these modern dances. And well they might enjoy themselves, for it would last such a short time. If they were to mature

into oysters they would in about sixteen days develop a thin shell and settle to the bottom. There they would attach themselves to a shell or some other clean surface with a little glue which was carried around for that purpose. Their dancing days would be over, for they would never move again except by the hand of man, and then they would get stewed.

But these particular oyster larvae did not even get that far in life. The thing that interested Dr. Kincaid was to artificially create conditions so near the natural conditions in sea water that they would live through and set as baby oysters known as spat or seeds. To do this the sea water would have to be warmer than that of Samish Bay, as it requires a temperature of at least 68 to 72 degrees. I shall briefly describe the difficulties he encountered.

The first thing necessary was to have a sufficient number of larvae, the fertilized egg of the oyster, with which to experiment. We were never again able to duplicate the experience related above. One day on the beds we observed a mass spawning. As the tide came in the oysters began to spawn, and it continued until we were surrounded by perhaps an acre of sea water made white by larvae. But we had no way of preserving it and it was soon mixed with the entire waters of Samish Bay. Dr. Kincaid secured a hand operated cream separator. Water was taken from the bay and after much hand turning of the separator we were able to secure sufficient spat to start the experiment.

Second, was a container sufficient in size to keep the larvae while maturing. Several containers were tried without success. Dr. Kincaid then found and tried a large beer barrel. With great glee he announced that he had made a discovery. Oyster larvae were fond of beer; they danced around as though greatly stimulated. They lived longer than in previous trials, but soon "faded out".

Then he decided on a new effort. He drew plans for a cement tank about four by eight feet in size. This was to be constructed on the shore. A pipe line was to connect it with the bay. A constant flow of sea water was to be provided through this pipe by use of a pump and motor. We had this constructed under his direction. He secured some type of a filter which would permit the water to slowly drain out, as the fresh water came in, but retain the larvae alive for several days, but not to the setting stage of development. He decided the cement might be going through a chemical change that affected the larvae so he went to Bellingham to read up on it at the library. That night at the dinner table he told us this joke on himself. He had left his laboratory in a hurry, dressed in work clothes and heavy logger type shoes. He took the interurban railroad, which in those days skirted the bay between Blanchard and Bellingham, stopping near the Rock Point plant. The station was called "Samish". On his way home he had told the conductor he wanted off at "Samish". The conductor looked him over in surprise and said, "You must be a stranger here. Loggers always get off at Blanchard. That's where the mill is."

Dr. Kincaid always had a delightful sparkle of humor, most of his jokes were on himself.

The result of his investigation was that, according to authorities, cement does for some weeks after construction go through a process of chemical change. Before that time expired the weather and the water in the bay became colder and the larvae died. The season ended soon and Dr. Kincaid had to return to his work at the University. As he left, with a laugh he said, "I have had a lot of fun this summer. I hope I can return for I think I can pull another trick from the bag."

Since then he has pulled a lot of tricks from his bag. A year later Mr. Mogan of the Willapa Oyster Company furnished him a laboratory on Willapa Bay. They provided him with a pool, and experimented on a large scale. Later he participated in a still expanded program carried on by a group of oystermen in Willapa Bay. This is still being carried on. Each year new tricks are being pulled out of the bag, but to date they have not been entirely successful.

Dr. Kincaid, now retired, has a distinctive title as long as some of the scientific names of the diatoms he used to show me. He is introduced as Trevor Kincaid, Sc. D., Professor Emeritus, University of Washington Research Consultant, Washington State Department of Fisheries. As an authority on Biology he has attained not only local recognition, but national and international fame.

In his book, "The Oyster Industry of Willapa Bay", published in 1951, he makes the following statement on the subject above discussed. Speaking of the State Department of Fisheries laboratory at Nahcotta he says:

"The laboratory is also conducting experiments which it is hoped will lead to the establishment of hatcheries for the rearing of the oyster larvae under artificial controlled conditions, and thus stabilizing the industry in the matter of producing oyster seed. This, if accomplished, would also free us from the costly procedure of importing our seed supply from Japan."

Success may some day crown the efforts carrying on the solution of this most difficult problem. But the matter of producing conditions imitating nature so closely as necessary in the matter of birth of oysters is most difficult. Biologists on the east coast have worked with it for many years, but only with limited success. In my collection I have an oyster shell given me by a biologist (whose name I have forgotten), whom I met in the east at an oyster convention. Attached to it are several tiny eastern oyster spat. On the shell is written "Artificially caught oyster spat". At the convention artificially caught oysters, the first and only ones I have ever seen or heard of, were served at the banquet. It was stated that the average cost of production was \$1.00 per oyster. The biologist who produced them was called on to give his experience. The sum total of his speech was the extreme technical problems connected with it, the constant observation necessary, and that a baby incubator nursery was simple and easy to operate in comparison with it.

Future failure or success is anyone's guess. I still have wishful thinking, but my candid opinion is that to produce oyster seed artificially in commercial quantities, and at a reasonable cost, would be a miracle.

I believe Dr. Kincaid shares this view, for in a recent letter he writes:

"I was pleased to get your letter since it reminded us of old times, including adventures with my Model T Ford, many happy and instructive hours at your Samish Bay home, and a well packed 'bag of tricks' which seemed quite bottomless as I drew upon it, especially the pursuit of the wily oyster larvae, which even at this late date have not been brought under biological control. Even in England, after a number of initial successes which seemed to foreshadow the production of the European flat oyster on a commercial basis, they have had a number of unexplained setbacks which have kept them guessing. Even their 'bag of tricks' seem to have given out."

**CHAPTER VI**  
**A PACIFIC OYSTER GROWERS ASSOCIATION IS BORN**

During the first few years the Rock Point Oyster Company of Samish Bay was the sole importer of seed from Japan. According to the records of the United States Customs Office in Seattle, and in accordance with my own records, most of which I still have, our imports were as follows:

1922 original shipment. . . . .	400 cases
1924 Rock Point Oyster Company -- . . . . .	400 cases
1925 Rock Point Oyster Company . . . . .	840 cases
1926 Rock Point Oyster Company . . . . .	1403 cases
1927 Rock Point Oyster Company . . . . .	4050 cases
1928 Rock Point Oyster Company . . . . .	1367 cases
1929 Rock Point Oyster Company . . . . .	1500 cases
1930 Rock Point Oyster Company . . . . .	2750 cases
Total . . . . .	12,802 cases

It has since become a well recognized fact, substantiated by experience in each new district to which the industry has expanded, that the first few crops yield very heavy in gallons of meat. As the history of the industry progresses the decline in gallonage per case of seed in each district will be reviewed. During the first years the Samish Bay average was approximately fifty gallons per case, or over 600,000 gallons from the seed planted from 1922 to 1931.

Willapa Harbor, so far as my memory serves me, was the first expansion of the industry. The Seattle United States Custom's Office records show imports for 1931, Rock Point Oyster Company, 600 cases, and 2310 cases by four importers to Willapa Harbor. I am quite sure other seed had been shipped during 1928-1930, but I have found no record of the shipments. In any event, interest in this species of oysters (*Ostrea Gigas*) had become quite alive on the West Coast, especially in Willapa Harbor.

This was evidenced by the formation of an industry association in 1930.

The formation of this association marked an important point in the history of the industry. An association such as this is made up of the business competitors of the industry. Its objectives are to assist its members and the industry in dealing with mutual business problems. Every association, whatever its nature, must, to be successful, operate in the public interest. No association opposed to the public welfare, but conducting a program entirely to benefit its industry, can long exist. Associations are of vital importance in American economy. This is especially true with industries such as the growing, cultivating, harvesting and marketing of oysters.

The Olympia Oyster Growers Association has recently celebrated its Golden Anniversary. The activities of the Association has through the years reflected the life, advancement and development of the Olympia Oyster industry, and as well the lives, the joys and sorrows of those who participated in it.

The Oyster Institute of North America celebrated its Golden jubilee in Baltimore in July, 1958. During most of that fifty years I have had sufficient contact with that Association (known from 1908 to 1932 as the Oyster Growers and Dealers Association of North America) to know that it has played a vital part in the oyster industry on the east coast and the lives of those engaged therein, during this long period of time.

The Association which has been the official spokesman for the Pacific oyster is not yet old enough to celebrate its Golden jubilee. It is now but 33 years old. Yet during those years its activities have been so numerous, so important, so vital to the very life of the industry, that I cannot do justice to the Pacific oyster industry historically without going into detail in regard to the organization of the association, and thereafter interweaving as graphically as possible the growth and expansion of the industry, the part taken by the association therein, and the lives of the men who faithfully carried on the Association's activities as industrial leaders.

### **Background of Organization**

To Willapa Harbor the oyster business was not a stranger. Its great expanse of inter-tidal flats were a natural habitat for oysters. The native oyster was known in the early days in San Francisco as "Shoal Water Bay Oysters". For reasons not related to this story these oysters had declined almost to extinction before 1930. In the early part of the century the "Eastern" oyster had been brought into the Harbor, the industry had spiraled to a high point, then declined to a low level in production.

In the 1920s vast areas of the tide flats had been lost to the owners by failure to pay the taxes, and the county held tax title. Some of the larger companies, such as the Long Island Oyster Company and the Toke Point Oyster Company, were still going concerns. They still retained their oyster lands, boats, floating equipment and shucking plants. The Long Island Oyster Company had a power dredge. When the introduction of Japanese oysters in Samish Bay, Northern Puget Sound, was reported and proved a success, both from a production and marketing standpoint, they naturally began to speculate on adapting it to their waters, thus again putting to use their tide flats and again putting themselves into business.

Trial plantings of seed were made, which showed remarkable results. It became a fertile field for promotion. Gerald T. Mogan became an active purchaser of tax title tide lands from the county. He organized and promoted the "Willapa Oyster Farms", "Bay Point Oyster Farms", and Willapoint Oysters, Inc." Their seed matured so rapidly that it was marketable size in eighteen months.

But at this point they experienced a great awakening and disillusionment. It had been so often stated that it became common belief that the markets stood ready to absorb at a good price, all the oysters that could be produced. The falacy of this presumption became realized in the fall and winter of 1929. As the newly and rapidly developed supply of oysters flooded the markets, confusion and instability followed. It was a price war from the start. Price was the only thing that talked. The question of grading and difference in price for the various grades were among the problems to be solved, and could only be solved by an organization within the industry.

### **Temporary Organization**

In the spring of 1930 a number of those interested held a meeting in Seattle. Myron T. Heuston, who was connected with the Long Island Oyster Company of South Bend, and lived in Seattle, called the meeting. No minutes were kept of the meeting, but it was instrumental in a second meeting being called for August 8, 1930. A copy of the minutes of that meeting, follows in part:



**MINUTES OF NORTH PACIFIC OYSTER GROWERS  
ASSOCIATION, AUGUST 8, 1930**

Minutes of the meeting of those interested in the production and sale of Japanese transplanted oysters, held at the Raymond Hotel, August 8th, 1930, at 12 o'clock. Those present were: Frank Nixon, Carl Gylling, Fred Eichner, S. I. Dennis, George Wilson, and Senator Norman, all of the Bay Center Oyster Company of Raymond; E. N. Steele of the Rock Point Oyster Company of Olympia; J. J. and E. G. Brenner of the J. J. Brenner Oyster Company of Olympia; Myron T. Heuston, Chas. H. Mills, Ira and Richard Murakami of the Long Island Oyster Company of South Bend; J. O. Reltan of the Willapa Bay Oyster Company of Seattle; F. C. Forroc of the Long Beach Oyster Company of Long Beach; J. S. Waldrip and O. C. Hanson of the Olympia Oyster Company of Olympia; W. J. Waldrip of the North Bay Oyster Company of Olympia; F. W. Wiegardt of the Wiegardt Bros. Oyster Company of Ocean Park; Trevor Kincaid and Gerard T. Mogan of the Bay Point Oyster Farms of Seattle; and W. C. Bristol of the Toke Point Oyster Company, Consolidated, of Portland, Oregon.

The meeting was called by Chairman Myron T. Heuston of Seattle. Dinner was served, featuring the oysters in which all attending were interested. The oysters being furnished by the Long Island Oyster Company.

After dinner, Mr. Heuston opened the meeting by relating that a temporary organization had been formed some time ago in Seattle, of which he was chosen as temporary chairman. That meeting had been followed by a meeting of a committee to consider a name to be used by all growers in place of Japanese oysters and also to report on advertising and marketing.

Mr. Gerard T. Mogan, president of the Bay Point Oyster Farms, moved that vote of thanks be passed to Senator Norman for his efforts in the legislature in behalf of the oyster industry and his efforts in securing appropriations for roads in Pacific County. Motion seconded and unanimously passed. This was followed by remarks of Professor Kincaid, biologist of the State University of Washington, covering his experiments and work connected with the development of this oyster.

E. N. Steele, president of the Rock Point Oyster Company, was called upon for general remarks.

It was then moved, seconded and unanimously passed that the previous actions of the temporary organization be adopted and that the principle of proceeding to organization of a permanent nature, be approved. This was unanimously approved by a standing vote.

The matter of the adoption of a name, was then taken up for discussion. The following names were suggested: Pacific Oysters, Cascade, Western and Chinook. Upon being put to a vote, all but two present voted in favor of "Pacific Oysters" and this name was adopted. It was moved, seconded and passed that the association adopt the name of "North Pacific Oyster Growers Association."

It was moved, seconded, and passed that the actions of the committees previously appointed, be adopted as the actions and recommendations of this association.

The previous committee on marketing was as follows: E. N. Steele, chairman; Myron T. Heuston, Gerard T. Mogan and J. J. Brenner. At this time, their report was read, reading as follows:

To the end that a ready market may be found for all oysters grown in the Northwest of the Japanese variety and at

a satisfactory price, the Advertising Committee recommend as follows:

1. We recommend that the name adopted by the organization that applies to all Japanese oysters grown in the Northwest be used by all growers to give the name the greatest publicity possible: That the name not be used as a substitute for the grower's trade name or brand, but that it be coupled with it to the end that in time the name will bear a definite meaning in the mind of the public, same as does "Olympia Oysters" or "Eastern Oysters" at the present time.
2. That special effort be made to have published as extensively as possible, stories relating to the development of this oyster industry, pointing out the special benefits of a locally grown oyster because of its freshness and quick delivery for consumption; also touching upon the superior qualities of this species of oyster and treating as frequently as possible the matter of food value of oysters, their iodine content and other medical qualities. Articles of this nature are of such interest to the general public that papers and magazines print them without cost and this affords valuable and inexpensive means of calling the public's attention to the industry, all of which helps the general sale of oysters.
3. That as the season progresses we study advantages that might be gained by group advertising, and methods that might be used to the best advantage, having always in mind that such advertising, in order to be satisfactory to all growers, must advertise the product as a whole and not to the special advantage of any grower. The most equitable manner of assessing the growers for the purpose of paying the expense of the organization and the advertising should also be studied. We recommend that the association be organized on a membership basis, each member to pay annual dues sufficient in the aggregate to pay the general expenses of the organization and that any moneys raised for advertising purposes be through the agreement in writing among members to pay a percentage of gross sales during the agreed period of time. The agreement to specify generally the manner in which the funds are to be used. That the advertising committee have general supervision of the expenditure of such funds.

At this time, the following committee was appointed to make recommendations as to what prices should be made in order to compete with other oysters sold in this locality. E. N. Steele, chairman, Myron T. Heuston and Gerard T. Mogan. The meeting recessed pending a report from the committee.

Upon re-assembling, the committee reported and the report was adopted.

In order that the committee on organization might intelligently prepare articles of incorporation, etc., it was moved that at this time, we proceed to the election of officers and the following were unanimously elected:

President - - - - Myron T. Hueston, Long Island Oyster Co.  
Vice President - O. C. Hanson, Olympia Oyster Co.  
Secretary - - - - Gerard Mogan, Bay Point Oyster Farm, Inc.  
Treasurer - - - - Frank Nixon, Bay Center Oyster Co.  
Trustees: J. J. Brenner, J. J. Brenner Oyster Co.  
Fred C. Ferree, Long Beach Oyster Co.

Myron T. Hueston, Long Island Oyster Co.  
W. C. Bristol, Toke Point Oyster Co.  
O. C. Hanson, Olympia Oyster Co.  
E. N. Steele, Rock Point Oyster Co.

Meeting adjourned, subject to call of the President.

GERARD T. MOGAN,  
Secretary

### **Permanent Organization**

A meeting was held at the Hotel Governor, Olympia, Washington, on September 13, 1930, at 12:30 p.m. At this meeting the committees appointed at the previous meeting to prepare Articles of Incorporation and By-Laws made its report. They were read and adopted section by section. The North Pacific Oyster Growers Association was the official name adopted. The committee, William C. Bristol, J. A. Reitan and Gerald T. Mogan were given a vote of thanks and the committee discharged.

Mr. Hueston read a letter from a Mr. Yamashita, representing certain oyster growers in Japan, proposing direct shipment of oyster seed from Japan to Willapa Harbor. The meeting then adjourned.

The next few meetings developed some interesting facts and problems for consideration. The marketing committee consisting of E. N. Steele, chairman, Myron T. Hueston, Gerald T. Mogan, Frank Hoy, Earl G. Brenner and Ole C. Hanson, held a meeting on December 12, 1930. An examination of prices being quoted and size and grade designation being made by five of the largest shippers revealed the following:

Jumbo ----- 40 to 75 oysters per gallon  
Large -----64 oysters per gallon  
Medium -----96 oysters per gallon  
Small -----120 oysters per gallon  
Selects-----75 to 120 oysters per gallon  
Standards-----120 to 200 oysters per gallon

Prices ranged from \$2.25 per gallon to \$3.50 per gallon, but some were paying express charges to certain marketing centers; others all prices F.O.B. shipper's plant. Some charged more where packed in small containers; some did not. Some had a wholesalers price or restaurant and hotel price, and others a price to the markets. There was no uniformity in grade or price. The need for correction was pointed out; the remedy left for further consideration.

Thus the New Year, 1931, was ushered in. This new industry, the transplanting of seed oysters from Japan to the waters of the State of Washington, after eight years of pioneering by one company, had been found adaptable to the waters of both Puget Sound and Willapa Harbor. The plantings of seed had been greatly increased. A greatly increased quantity of oysters were suddenly available for market, all of which produced disorganized confusion. An early expansion of markets was necessary.

New markets were not developing as had been expected. The struggle for the existing market had caused a continuing price war. Each oyster producer was disillusioned as to statements that had been publicized by those who hoped for large profits through promoting new oyster producing companies and the sale of stock therein.

These statements were to the effect that the oysters could be produced ready for market at a very low cost of production and that extensive markets stood ready and eager to buy the product at a good price. They found those markets slow and resistant. Brokers and wholesale dealers became very sharp buyers, and used every trick known to them to break the price down lower and lower.

In all of the meetings of the Association during the year 1930 and also in the committee meetings, the principal subject for consideration was how to develop more markets and how to stabilize prices.

And so we find that the year 1930 ended, and 1931 opened with confusion, suspicion, and lack of organization existing in the Pacific oyster industry. Fortunately rather complete minutes were kept of all meetings of the North Pacific Oyster Growers Association. These minutes disclose the degree of trouble the oystermen were having. Trouble causes men to get together. That is the time that an association becomes active in an effort to solve the problems involved. A brief review of the minutes will illustrate that point.

The first meeting was held on January 30, 1931. The discussions developed the following:

1. Some opening houses were paying openers 25 cents per gallon, others 30 cents per gallon, and others 60 cents per hour for opening.
2. One J. W. Hendrickson proposed to start a plant to can oysters. He would offer 75 cents per gallon for oysters delivered at the plant.
3. It was proposed to pay 5 cents on each gallon of oysters sold to use as an advertising fund.
4. It was stated that 17,000 cases of seed had been planted, 13,000 cases in Willapa Bay, the balance in Puget Sound, which would produce over one-half million gallons of oysters.

#### **MEETING OF MARCH 13, 1963, AT GOVERNOR HOTEL, OLYMPIA**

1. The advertising committee was increased to five members.
2. Mr. Hueston, president, announced he would soon be putting out a cove oyster (canned).
3. The advertising committee, E. N. Steele, chairman, J. J. or Earl Brenner, J. O. Reitan, Myrton T. Hueston, G. T. Mogan.

#### **MEETING OF June 19, 1931, AT GOVERNOR HOTEL, OLYMPIA**

1. Development of new markets took up the time completely.

#### **First Annual Meeting**

First annual meeting of North Pacific Oyster Growers Association, held August 14, 1931, at the Governor Hotel, Olympia.

After the election of officers the entire meeting was devoted to the discussion of price. The Long Island Oyster Company, Mr. Heuston, president, and Frank Hoy, representing Willapoint Oysters, announced their prices for the coming season, which differed somewhat. E. N. Steele for Rock Point Oyster Company, said they would

meet competition, but would not go below \$1.50 per gallon. Further suggestions were made for sign advertising.

Meeting of November 14, 1931, at Governor Hotel, Olympia.

1. It was announced that about 1500 cases of seed had been planted on Grays Harbor.
2. E. B. Dudden proposed putting in a cannery between Raymond and South Bend, and would use 250,000 gallons of oysters.
3. President Hueston made an appeal for cooperation which he said was necessary to save the industry.

Following this meeting Mr. Heuston held a district meeting in South Bend on December 2nd, and another in Olympia. In each of these meetings he made a desperate appeal for stabilization of prices, standardization of grades, and general cooperation.

In the meantime the growers of Northern Puget Sound had held a meeting in Seattle, in which they passed a resolution setting out the things that should be done to bring about the results that Mr. Heuston had called for, making the requirements more specific.

They suggested, among many other things, a survey as to the quantity of oysters that could be sold at a profit in advance of each year's seed buying, and a controlled quantity of seed to meet that demand.

These meetings produced a considerable amount of interest, and President Heuston called a meeting which was held at the Governor Hotel in Olympia on December 15, 1931. Fifteen members were present. Each one was called upon for remarks. Each one expressed hope for cooperation and stabilization.

Three new practices by producers were deplored. One was selling oysters at a cut price and calling them "cuts". The other was for opening houses to open in excess of their orders, then sell at reduced price, dumping them on the market, so to speak. Third, selling oysters in the shell at prices that would enable the city opening house to undersell the grower-packer.

Thus the year 1931 ended. Many meetings had been held. A lot of hard work had been done by the officials, but results were poor so far as accomplishment was concerned. Growers were beginning to learn what was wrong, but realization of results was the thing needed. One suggestion had been made which was very constructive. This was that the Association should employ a full time man as secretary. Steps were to be taken to find out the cost and the assessment that would be necessary to pay the expense of salary and office.

Let us see what the year 1932 had in store for the industry.

### **The Association Employs a Secretary**

Annual meeting of the North Pacific Oyster Growers Association, held in the Governor Hotel, Olympia, August 25, 1932.

During the spring of 1931 a total of 2,910 cases of seed had been brought into the State of Washington. During that year Willapa Bay, Grays Harbor and new areas in Puget Sound had come into production. In the spring of 1932, instead of curtailing seed planting until more markets were developed, a total of 21,800 cases of seed were planted. Much conversation had been going on among the oyster growers. A large quantity of oysters were available for the coming season. The past year's marketing experience was an unpleasant memory.

"Dinner was served at 12 o'clock, after which the meeting was called to order by the President, Myron T. Heuston. Those present, including the companies they represent, were as follows:

C. W. Overturf, Willapa Bay Oyster Co., Long Beach, Wash. F. W. Wiegardt, Wiegardt Bros., Ocean Beach, Wash. J. L. Wiegardt, Wiegardt Bros., Ocean Beach, Wash.  
G. T. Mogan, Willapoint Oyster Co., Seattle, Wash.  
R. H. Bailey, Padilla Oyster Beds, Seattle, Wash.  
Mr. Davis, Grays Harbor Pacific Oyster Co., Aberdeen, Wash.  
E. N. Steele, Rock Point Oyster Co., Inc., Olympia, Wash.  
John C. Barnes, Rock Point Oyster Co., Inc., Blanchard, Wash.  
M. T. Heuston, Long Island Oyster Co., Seattle, Wash.  
Dr. P. Schonwald, East Point Oysters, Inc., Blanchard, Wash.  
Chas. H. Mills, Long Island Oyster Co., South Bend, Wash.  
C. W. Maynard, National Oyster Co., Olympia, Wash.  
Chas. Keetel East Stanwood, Wash. O. C. Eide, Stanwood, Wash.  
David C. Bruer, Bruer Brothers, Inc., Seattle, Wash.  
Fred H. Stewart, Bruer Brothers, Inc., Seattle, Wash.  
M. J. Thome, Bruer Brothers, Inc., Seattle, Wash.  
M. J. Albright, Bruer Brothers, Inc., Seattle, Wash.  
H. F. Allen, Tyee Oyster Co., Purdy, Wash.  
J. N. Ellison, Olympia, Wash.  
Odah Huston, Olympia,  
Wash. J. S. Waldrip, Olympia Oyster Co., Seattle, Wash.  
Mr. Anderson, Seattle, Wash. H. G. Wank Seattle, Wash.  
M. S. Bornstein, East Point Oyster Co., Seattle,  
Wash. F. R. Nettleton, Bay Center Oyster Co., South Bend, Wash.  
Frank Nixon, Raymond, Wash.  
M. E. Halversen, Halversen & Sons, South Bend, Wash.  
Ben F. Nauman, Associated Oyster Lands, Inc., Bow, Wash.  
Mrs. Mary Elstereit, Similk Bay, Wash.  
Mrs. Jeanette O'Neil, Oakland Bay, Wash.  
Mrs. Deer, J. N. Deer Oyster Co., Shelton, Wash.  
J. J. Brenner, J. J. Brenner Oyster Co., Olympia, Wash.  
E. G. Brenner, J. J. Brenner Oyster Co., Olympia Wash.  
O. E. Holmberg, Camano Blue Point Oyster Co., Stanwood, Wash.  
J. L. Moore, Camano Blue Point Oyster Co., Stanwood, Wash.  
M. Yamashita, Seattle, Wash.  
B. B. Williams, Seattle, Wash.

E. N. Steele, Mayor of Olympia, was first called upon for an address of welcome, who assured the oystermen that during his administration all oystermen visiting the city would be welcomed and given the freedom of the city. He suggested that for more commodious and suitable quarters for holding the meeting that they recess and move to the Council Chambers of the City Hall. This was done, and a few minutes later the meeting was called to order in the City Hall.

Mr. Fitzherbert Leather, of Seattle, Washington, was then called upon for an address on the subject of organization and its effects upon stabilization of the markets and prices. Mr. Leather read his very interesting and valuable discussion and submitted the manuscript, which was ordered placed on file.

Dr. A. E. Hopkins, of the U. S. Bureau of Fisheries, was then called upon to make an address in regard to his

work on oysters on the Pacific Coast. Dr. Hopkins gave a very interesting discussion on the propagation of oysters in our waters, and touched upon the laboratory and field work that he is doing in this state.

Dr. Schonwald, President of the East Point Oysters, Inc., of Stanwood, Washington, was then called upon to tell of the organization of the oyster growers in the northern part of Puget Sound. Dr. Schonwald read a very interesting discussion on production and sale of oysters and the value of associating and organizing, and told of the organization and meeting of the oyster growers in the northern part of Puget Sound at a meeting held on August 4, 1932, at 509 Olive St., Seattle, Washington. He then read and presented for adoption the resolution which was adopted at that meeting. After he completed his address, said resolution was presented and unanimously passed by the North Pacific Oyster Growers Association, and said resolution, together with the manuscript, were ordered placed on file.

Next a resolution was presented approving the work of the State Board of Health, requesting state officials to find sufficient funds to continue to carry the work through the season, and provide that a copy of said resolution be sent to Governor Hartley, a copy to Charles R. Maybury of the State Department of Fisheries, and a copy to the State Board of Health. It was moved, seconded and unanimously passed, that the resolution be adopted.

Following this a general discussion took place as to what price should prevail at the beginning of the season. This discussion was carried on by Mr. Mogan, Mr. Mills, Mr. Barnes and many others. Mr. Steele finally moved that a committee of nine be appointed by the president to retire for consultation and bring back a recommendation. This motion was seconded and passed, and Mr. Heuston appointed the following: G. T. Mogan, E. N. Steele, Dr. P. Schonwald, O. E. Holmberg, Ben F. Nauman, E. G. Brenner, Chas. Overturf, Chas. Mills, F. R. Nettleton, J. S. Waldrip and Myron T. Heuston. The committee retired and in due course made the following recommendations:

1. That the following schedule of prices to wholesalers be adopted, the same to be considered as the minimum price to wholesalers:

Jumbos running 80 or larger -----	\$1.35 per gallon
Counts running 80 to 120 per gallon -----	\$1.60 per gallon
Standards running 120 to 160 per gallon-----	\$1.85 per gallon
Selects running 160 or smaller per gallon-----	\$2.10 per gallon
Shell oysters-----	\$1.00 minimum per 100

2. That each grower pay to the treasurer 5 cents per gallon on all oysters marketed, and 5 cents per hundred on all shell oysters sold, same to be used under the direction of the trustees for the payment of a full time secretary and costs of carrying on organization work.

3. That the Board of Trustees as soon as possible meet and employ a full time executive secretary, said secretary not to be financially connected with the oyster business either directly or indirectly.

4. That the secretary prepare and present to all oyster growers for their signature, an agreement to follow the provisions above set out.

These recommendations were presented, and it was moved by Mr. Mogan, seconded by Mr. Barnes, Mr. Holmberg, and others, and was unanimously passed.

The hour being late, it was moved that the meeting adjourn subject to the call of the President.

Dated at Olympia, Washington, August 25, 1932.

E. N. STEELE  
*Recording Secretary*

Following this meeting the Trustees met at the Tacoma Hotel on September 1, 1932.

This meeting proposed an amendment to the Constitution and ByLaws providing for an executive secretary who should not be financially interested in the oyster business. Also, providing for an executive committee to whom all complaints were to be made of unethical marketing practices of any member of the Association. They were then to try to bring about harmony and closer organization.

Prospective persons for the appointment of an executive secretary were then interviewed and Fitzherbert Leather was selected because of his qualifications. He had previously been associated with J. William Sheets Advertising Agency of Seattle, who had conducted an advertising campaign for the Olympia Oyster Growers Association. He was to commence work at once.

The next meeting of the Association was held in Olympia on September 29, 1932. Over forty growers were present.

The proposed amended Articles of Incorporation and By-Laws were read and adopted. The following trustees were elected: Myron T. Heuston, G. T. Mogan, O. C. Hanson, E. N. Steele, J. J. Brenner, F. R. Nettleton, W. D. Davis, and Dr. Schonwald. Mr. Heuston was elected President. The by-laws provided for the payment of five cents per gallon and five cents per sack for oysters harvested and opened, or sold in the shell, to the treasurer as an assessment to pay the expenses of the Association.

On October 28, 1932, the trustees held a meeting at the City Hall in Olympia.

Mr. Leather, the recently appointed full time employee, was asked to make a report on his work to date. He had been very busy investigating what was needed to stabilize the oyster business. He made a complete report. In regard to names to be applied to the various grades, after analyzing the situation and giving his reasons for so doing, he recommended that the names then being used be changed as follows:

<u>Former Name</u>	<u>New Name</u>
Jumbos	Large
Counts	Medium
Standards	Small
Selects	Extra Small

It was moved, seconded and unanimously passed that the recommendation pass. It was thought that this action would settle this question of grades which had been so troublesome, but as we proceed we will learn that it was far from being settled.

It was then passed that an extra charge be made for all containers less than half gallon size. Prices on opened oysters from \$1.35 to \$1.80 per gallon, according to grade and whether sold to wholesalers, retailers or restaurants. An effort was to be made to equalize freight rates. All adopted rules and prices were to become effective on October 31, 1932.

The trustees sent to all producers and wholesalers a circular setting out the rules, regulations and market price quotations as approved at this meeting.



**CHAPTER VII**  
**THE NATIONAL DEPRESSION AND THE NATIONAL**  
**RECOVERY ACT CODE**

As I have related the Pacific oyster industry was born in Samish Bay, in front of Chuckanut Drive between Bellingham and Blanchard, Washington. It first became commercially active in 1923, and remained a local industry until 1928 when test plantings of seed were made in Willapa Bay, Grays Harbor, and various locations in Puget Sound. From that time on planting of seed was extended rapidly and the oysters thrived and developed rapidly. By 1930 the oysters began to flood the markets. This sudden expansion alone would have caused marketing problems at any time, but the great depression of the early 1930s was upon us and its wave of disaster swept the country. As its intensity increased the quantity of oysters seeking a market increased. The problems which confronted the oystermen during the years 1930 to 1933 I have set out rather in detail. The oystermen were in the process of finding an answer to some of their problems when something happened which was to put into law the code of ethics in marketing, the legalizing of establishing a fair price and making it illegal to cut below it; the establishment of grades of oysters, creating uniformity among the packers.

It was announced in the early part of 1933 that the oyster industry, as well as all other industries, was to operate under a Code of Fair Competition, formed in compliance with the National Industrial Recovery Act passed by Congress. A meeting of the North Pacific Oyster Growers Association was called by its President, 'Myrton T. Heuston, to be held on July 13, 1933, at the City Hall in Olympia.

There were thirty-eight present.

The industry during the past three years had spread to many places along the coast. Oyster companies and individuals were present from northern and southern Puget Sound, Grays Harbor, Ocosta, Westport, Willapa Bay and Willapa Harbor.

The National Industrial Recovery Act was read. Also a "Moral Code" for self-governing industries. Letters from the Fishing Gazette; from Howard W. Beach, President of the Oyster Growers and Dealers Association of North America, Inc.; and from Dr. Radcliffe, executive secretary of said association, were read. These letters all advised us that a code of fair competition was already being prepared, that all oyster producing sections had been geographically divided making Washington, Oregon, and California as the Pacific Coast Section. They urged the importance of cooperation, and of sending a delegate from the Pacific Coast Division of the oyster industry to the National Oyster Convention to be held in New York City, at which time it was proposed to adopt a National Code for the oyster industry.

The Association immediately went to work on reorganizing the Association to meet the needs of the proposed Code. Washington was divided into four districts. They were the North Puget Sound District; the Olympia (Southern Puget Sound) District; the Grays Harbor District; and the Willapa Harbor District. The following members were elected to represent these districts as an executive committee and trustees:

- |                         |   |
|-------------------------|---|
| North Puget Sound       | 1. C. E. Holmberg<br>2. H. J. Waters<br>3. M. Yamashita |
| Olympia District        | 1. E. N. Steele   |
| Willapa Harbor District | 1. C. W. Overturf                                       |

2. Robert Naismith

3. J. H. Doupe

Grays Harbor District

1. F. W. Mathias

At a trustee meeting the following officers were elected:

President, E. N. Steele; Vice-President, C. W. Overturf; Secretary and Treasurer, left open until the next meeting.

E. N. Steele was elected as a delegate to the National Oyster Convention to meet in New York for the purpose of preparing an Oyster Code.

### **National Oyster Convention**

both of Pacific and Olympia oysters. This proved to be of such importance that I sha The Olympia Oyster Growers Association also selected me as their delegate to the Convention, and joined in the expense. No records of this very important convention are available, so it will be necessary to rely on my memory. But the entire country was stirred by the hope inspired by this gigantic effort to revive the economy of the country by the adoption of the provisions of the National Industrial Recovery Act, which became known as the N.R.A. A feverish hope was expressed by the press and in every gathering of people or convention. It is not difficult to remember, and in fact is hard to forget, the stories of disaster and suffering that were heard everywhere. And it was a thrill to be involved in the setting up of the machinery provided by the law for the purpose of improving economic conditions.

The symbol of cooperation in the N.R.A. program was the "Blue Eagle". It had been adopted as a part of the N.R.A. movement just before I started cast. Banners were displayed everywhere. Each store displayed them in their windows, indicating co-operation. Above the Eagle it read "N.R.A. Member". Below: "We Do Our Part". The management, the clerks, and the employees pointed to it with a smile. In fact, before I reached the east I also had become quite enthusiastic.

I first attended a banquet given by the Oyster Convention which was meeting at the same time. I quote from an article appearing in the Fisheries Gazette:

“For the first time in many years-perhaps for the first time in Association history - the Pacific Northwest sent a delegate to the convention. E. N. Steele, Secretary of the Olympia Oyster Growers Association, and also President of the North Pacific Oyster Growers Association, filled the post well. In a ringing speech, he urged the whole industry to get behind the recovery program and live up to the oyster code.”

But when that convention was over it became a serious business.

A New York hotel, the name of which I have forgotten, was the headquarters of the Code Authority meeting. It was a magnificent hotel, adequately equipped with convention halls where all meetings were held. The Government officials had already done the organization work and prepared the itinerary. The first meeting included the entire Fishing Industry. After the preliminary speeches and explanations, this great gathering of men from all parts of the country were divided into sub-divisions, and all those interested in the oyster industry were assigned to another room for organization. This greatly reduced the group. Yet it consisted not only of representatives of oyster growers and packers from the East and West Coasts, but canners, processors, wholesalers, and every branch of the oyster industry in the United States.

The master code, which had already been prepared, provided the matters which applied to all parts of the industry which had to be decided by the entire group, such as processing and distribution functions, hours and wages, uniform trade practices, false advertising, misbranding, destructive price-cutting, secret rebates, combination sales, free deals, false measures, reversal of communication charges, dishonest account of sales, returns and allowances for containers, purchase from producers, false statements of accounts, and unearned service payments. Definitions had to be worked out, agreed upon, and adopted covering all these elements entering into the unfair competition practices found in the industry. This required much time and work. After it was accomplished, the group was again sub-divided. The provisions applying to the Eastern oyster and the Pacific oyster, which necessarily differed in many respects, were worked out by the groups respectively interested. For an entire week my time was so completely taken that I scarcely left the hotel. Each night, as well as the days, were taken in committee work until a late hour. I had the privilege of working with many very able men, who eagerly concentrated themselves to their work, which they hoped would be a forward step in effectuating the recovery of the oyster industry.

Finally the code was ready for drafting. I returned home and reported the results of the meeting both to the members of the North Pacific Oyster Growers Association and the Olympia Oyster Growers Association. Both organizations approved the report. The latter part of September, 1933, an official report from Washington, D. C., reported that E. N. Steele had been appointed as a duly elected member of the Code Authority for the fresh oyster industry for the Pacific Coast section, under N.R.A. regulations.

Perhaps there were but few industries that benefited more by the N.R.A. code than the Pacific oyster industry. It had been hampered from its birth with many of the problems that the code was intended to correct. It was a new industry which had experienced an abnormal growth. Production had expanded much more rapidly than the markets. The struggle for markets had encouraged the violation of every rule named in the code as unfair competition. This had caused a continuing price war which had reduced prices below cost of production.

Many association meetings had been devoted to a uniformity in grades. The code definitely settled this question.

Pacific oysters (*ostrea gigas*) Code set up size grades as follows:

All sizes: The largest oyster in the container shall be not more than twice the weight of the smallest oyster therein.

- Size (A) 90 or less count per gallon
- (B) 110 to 140 count per gallon
- (C) 150 to 180 count per gallon
- (D) 200 to 250 count per gallon
- (E) 275 and up count per gallon

Many other problems that had hampered the industry were here settled as long as N.R.A. was a valid law-until it was declared by the Supreme Court to be unconstitutional.

The members of the Association, which by then included most of the growers of Pacific and Olympia oysters, entered into its adoption and enforcement with enthusiasm. A meeting of the executive committee was held on July 25, 1935. The Code had been finally approved by President Roosevelt on February 26th of that year, 1934. As the Code had included Oregon and California as the Pacific Coast Section of the oyster industry, the name of the Association was changed from the *North Pacific Oyster Growers Association* to the *Pacific Coast Oyster Growers Association*, which name has continued to this time. They provided for an election of a Sectional Executive Committee of seven members of the industry, two to represent the South Puget Sound District, four the Willapa Harbor District, two the North Puget Sound District, two the Grays Harbor District, two the Oregon District, and two the California District. This Executive Committee also constituted the Compliance Committee under the code.

This meeting was followed by a meeting of all those engaged in the oyster industry on the coast, whether members of the Association or not. This meeting was held on August 9, 1934, at the City Hall in Olympia, Washington, its principal business being to elect code officials as above. The following were appointed by the chair to conduct the election: Dr. G. W. Ingham of Olympia, C. W. Overturf and judge F. W. Loomis of Aberdeen. The election was held and E. N. Steele was unanimously elected as National Executive Committeeman. The following were elected as Sectional Committeemen: E. N. Steele, J. H. Doupe, C. W. Overturf, A. L. Gibbs, F. W. Mathias, L. Wichsmuth, and Charles Shippy.

The committee then provided for preparation of a budget; the levy of an assessment under the code of 3 % of the gross sales; the employment of an executive secretary; that the sectional committee be constituted with duties pertaining to code enforcement and compliance. That the Association continue under the name Pacific Coast Oyster Growers Association and should be co-extensive with the Pacific Coast Section of the industry under the code. The machinery was set up for the operation and enforcement of the code. Thus the entire industry became united to work together under the code, the enforcement to be carried on through our own officials operating from an office shared jointly by the two organizations. All this was submitted to the Code authorities and approved.

With renewed hope that, working under these standards which must be applied alike to all members of the industry, and with the application of the "unfair trade practices" rules, marketing channels would open to a freer flow, and oyster products sold at a price that would yield a profit, the organization went to work.

The Sectional Code Committee held a meeting on August 22, 1934. E. N. Steele, C. W. Overturf, J. H. Doupe and F. W. Mathias were present.

They took action as follows:

1. Provided for a chart or form showing items of expense by a packer or grower for the purpose of determining his cost. The Code provided the selling price of oysters should not go below cost.
2. That forms be provided for uniform cost accounting.
3. Prepared a budget.
4. Employed John C. Barnes, of Olympia, Washington, as executive secretary and treasurer, and defined his duties.
5. Provided for rental and furnishing an office in the Olympia National Bank Building.
6. Provided for the levy of an assessment under Code Authority to cover expenses of Code work and enforcement.
7. Instructed the chairman to call a meeting of the industry to meet in Olympia City Hall on August 27, 1934. The price at which oysters should be sold was to be a special order of business.

The chart of accounts for the oyster industry required a form to be filled out by each oyster grower and packer showing the cost of each operation, I set it out in full as to the Pacifics. Applying to the Olympia oyster it required much the same data except the seed.

### **Chart of Accounts for Oyster Industry**

## PRODUCTION OF UNOPENED OYSTERS

### Pacific (Imported)

- Seed (Including all costs delivered at the oysters beds)
- Spreading Seed, (Including preparing beds and planting)
- Care of Beds
  - Patrolling and Inspection
    - Wages
    - Expense of Boat
      - Gas and Oil, Repairs, Other Supplies, Depreciation
- Breaking Up Seed and/or Transplanting
- Taking Up or Culling and Delivery to Plant or Shipping Point
  - Labor
  - Maintenance of Equipment (Floats, Float Houses, etc.)
  - Depreciation of Equipment
  - Supplies (Sacks, Twine, Etc.)

### Taxes

- Real Estate, Personal Property (Pro-rated), Business Tax

### General Overhead

- Administration (Pro rated)
- Truck Expense
- Miscellaneous
- Industrial Insurance and First Aid

CREDIT to Beds by Charges to Opening House for Oysters Shipped  
(in both quantities (sacks) and values)

## PROCESSING

### Pacific (Imported)

- Sacked Oysters (Cost at Beds)
  - Transportation to Opening House
  - Washing, Sacking and Shipping

### Opening

- Labor (On piece work basis or otherwise) including washing before opening
- Rent (Proportion of General Building Expense)
- Equipment Expense (Pro rated)
- Administration (Pro rated)
- Miscellaneous (Sacks, Twine, etc.)

### Packing for Shipment

- Labor, Boxes (Shooks and Nails), Cans, Ice (By Weight Used)
- Rent (Proportion of General Building Expense)
- Equipment Expense (Pro rated)
- Administration (Pro rated)
- Miscellaneous, Accounting and Management
- Insurance, Including Industrial Insurance and First Aid

Sales (Credited in Both Quantities (gallons) and values)

## EXPENSE ACCOUNTS TO BE PRO RATED

### Truck Operations

- Wages-Gas & Oil-Tires-Repairs and Replacements
- Depreciation-Licenses and Taxes-Miscellaneous

Credited by charges to Opening House for transportation of sacked oysters-remaining debit balance

to be pro rated to "Truck Expense" for Olympia and Pacific Oyster beds.

General Building Expense

Administrative-Repairs and Replacements

Insurance-Depreciation-Taxes (Real Estate) -Heat-Light

Power-Water-Supplies

Miscellaneous

Credited by charges to Opening and Packing both Olympia and Pacific Oysters and to Ice Making

Equipment Expense

Personal Property Taxes on Equipment

Repairs and Replacements of Equipment

Depreciation of Equipment-Miscellaneous

Credited by total of charges pro rated over Opening and Packing of both Olympia and Pacific Oysters and over Ice Making

Ice Making

Pro rated expense for power-Pro rated expense for water

Pro rated rent-Pro rated equipment expense

Chemicals consumed

Credited by ice used in packing both Olympia and Pacific Oysters

General Administration

Salaries of corporations officers

Salary of Superintendent

Office Expense

Salaries of clerical force-Telephone and Telegrams-Postage

Stationery and Supplies-Depreciation of Office Equipment

Miscellaneous

Interest or return on capital investment at present valuation

Legal and Accountant's Fees-Corporation License-Capital Stock Tax-Association Dues-Code Fees-Depreciation-

Bad Accounts-Miscellaneous-Sales Cost, including salaries, brokerage, advertising, etc.

Credit by charges to Olympia and Pacific Oyster Beds, to opening and Packing both Olympia and Pacific Oysters, to General Building Expense and to Ice Making.

The budget covered office rent and expense, salary of Executive Secretary, stenographer and traveling expenses, total \$5,310.00.

The meeting of August 27, 1934, was held at the City Hall, Olympia, Washington. After discussion Mr. John Wiegardt moved, seconded by Myron Heuston, that the following (which had already been adopted by the Willapa Harbor district) be the minimum price for the industry as follows:

(A) Grade \$1.25; (B) Grade \$1.40; (C) Grade \$1.60 per gallon

This was amended on motion of Mr. Doupe to read as follows:

(A) Grade \$1.50; (B) Grade \$1.65; (C) Grade \$1.85. To restaurants or retailers 25 cents added to each price. To be added to this where ordered in smaller than gallon cans, 6 cents in 1/2 gallons; 12 cents in quarts; 24 cents in pints, and 32 cents in half pints. Passed as amended.

The question as to the price to be charged for "Culls" or "Cuts" was left to be referred to the Code authorities for a decision. This was important for some had put a lower price on oysters that had been cut in opening. Some had

even called "cuts" oysters which had been opened and not sold, and sold them as cuts. This practice had caused price wars. The cost chart was approved and ordered distributed to all who were required to furnish them.

From the time of this meeting on August 27, 1934, until the Code was nullified by the decision of the United States Supreme Court, nothing of great importance happened to the industry. It was a big job and took time to circulate the cost of production charts, get them in and have the minimum price at which oysters could be sold officially determined by the Code authorities. In fact the data was practically all in and ready to submit when the decision was rendered. As my memory serves me, and all this data came to me, the price at which oysters were being sold was below the cost of production. On November 16, 1934, the Association held another meeting in the City Hall, in Olympia. Some growers made a desperate effort to increase prices but the wholesalers said an increased price would decrease sales. This the growers wanted least of all. They all had beds filled with oysters. Each year the seed plantings had increased. In 1932 there were planted in the State of Washington, according to official records, 21,800 cases; in 1933, 34,741 cases; in the spring of 1934, 64,550 cases. The growers had expended vast sums of money on seed, and the resulting oysters must be sold at some price as many purchasers had borrowed the money to pay for them, and some had mortgaged all they had as security. Needless to say, the price was not changed.

At this time another very troublesome matter arose. The selling agents for seed in this country had been Japanese. Mr. Yamashita, an oyster grower operating under the name of Western Oyster Co., had the principal agency.

On January 19, 1935, the Association held a meeting in the City Hall, Olympia. The President, E. N. Steele, called upon J. H. Doupe to explain the purpose of the meeting.

Mr. Doupe explained that during 1935 all seed would be sold through Mr. Yamashita, but that he had appointed a separate salesman for each of the three Code Districts of Washington. The Western Oyster Company, it was stated, had made a commission on each case of seed sold, which more than paid for their own seed. This enabled them to undercut prices, and did so, especially in Seattle, in competition with their seed customers. Each of the three agents were Japanese who were oyster growers. A fear was expressed that this would give each of them the same advantage in each district, thus giving them eventually control of all markets.

After much discussion Mr. Mathias moved that a committee of three be appointed in addition to the President, to contact Mr. Bradford of the N.R.A. for this state in regard to the sale of seed, and try to formulate a plan for the protection of the Pacific oyster growers on this coast. This motion passed.

Mr. Mathias then moved that at an adjourned meeting the said committee be authorized to present a plan whereby the growers could buy seed as a unit under the Association or a similar body. This motion was seconded by Mr. Doupe and carried unanimously. The committee appointed was J. H. Doupe, F. W. Mathias and Charles R. Pollock, E. N. Steele, exofficio.

On January 26, 1935, a meeting of the association was held in Olympia to consider the report of the above mentioned committee. Their proposal was read and unanimously adopted, and became Code Authority Bulletin No. 7. It provided that each oyster grower advise the executive secretary, an estimate of the quantity of seed needed in 1935. That all orders pass through the executive secretary, who was to try to have the quantity reduced if excessive. That no seed was to be bought through any agent who was a grower of oysters or otherwise a competitor of his customer.

The Bulletin also publicized a meeting held on January 30th, 1935, in Seattle, a dinner meeting between the committee, F. W. Mathias, J. H. Doupe, E. G. Brenner, Charles R. Pollock, and E. N. Steele, for the oyster association, and Mr. Uchiyama, the Japanese Consul, Mr. Tarada, official representative of the Department of Agriculture and Forestry of Japan, who holds jurisdiction of the oyster industry in Japan, Mr. Masuda, Mr.

Yamashita and Mr. Tonkimoto, the last two representing the international cooperative seed growers of Japan.

The Japanese listened attentively to our presentation of the facts. Well do I remember the reply by the Japanese Consul.. His easy, sympathetic approach to our problem, his admission that it might be best to give study to overproduction in this country and the limitation of seed sales, his assurance of the friendship of the seed growers. But it was too late to have it worked out for the 1935 seed shipments. And that was it. The meeting was adjourned.

But that was the birth of a new policy of purchasing seed. Mr. Mathias and Mr. Doupe, two men who were for so many years members of the Trustees of the Association and officials under the Code, again proved their constructive ability in this move toward centralized purchase of seed and financing association activities by adding a small charge to each case of seed. The fulfillment will be covered later.

### **A Period of Adjustment**

In 1935 the effects of the great depression were still with us. The oyster business, as well as many other industries, had been helped and somewhat stabilized by reason of the N.R.A. The provisions in regard to labor had given that segment of industry stability and buying power. The rules of the Code regarding fair trade practices and price regulations had at least started the industry in the right direction to correct many of the evil methods which had beset it in the past. Many meetings had been held in previous years condemning the very things which were ruled out by the Code. There is no telling what might have been finally accomplished if the law had not been held to be unconstitutional in May, 1935.

At a meeting of the Association, held in the City Hall on May 4, 1935, it was voted to increase the price of opened oysters to \$1.45 per gallon for A grade, \$1.60 for B grade, and \$1.80 for C grade. Provisions were made for an assessment to provide operating expenses for the Association and Code enforcement. Also for an advertising program. After the Code was nullified the industry was thrown into confusion.

However, the Trustees of the Pacific Coast Oyster Growers Association held a meeting on August 3, 1935, received the report of Mr. Barnes, Executive Secretary, that the office of the N.R.A. had been closed; also he filed his final treasurer's report. The Trustees took action by a resolution to the effect that the Association continue to function in a most aggressive manner, and employ an Executive Secretary for full-time work.

This was followed up by holding the annual meeting in the City Hall in Olympia on August 17, 1935.

The meeting was well attended. The recommendation of the Trustees was adopted. Prices for the coming year were suggested at \$1.25 per gallon to \$1.70 per gallon, according to size. An advertising plan was worked out. Several of the wholesaler oyster companies agreed to support it.

It was agreed that some of the provisions of the Code, especially referring to filing of prices and fair trade practices, be selected by a committee appointed by the President, E. N. Steele, and later presented to be voted on as new by-laws of the Pacific Coast Oyster Growers Association.

The following were elected as Trustees:

Puget Sound District: E. N. Steele, H. C. Waters.

Willapa Harbor District: J. H. Doupe, C. W. Overturf, Myron T. Heuston, J. L. Wiegardt.

Grays Harbor District: F. W. Mathias.



These Trustees elected the following officers: President, E. N. Steele; Vice-President, Myron T. Heuston; Executive Sec'y-Treasurer, John C. Barnes.

With this new start the industry was again under way, now standing on its own legs.

The next three years the industry was to be faced by hope and disappointment. A few of the faithful met each difficulty as best they could. The Trustees held frequent meetings, carefully went over each problem and laid out ways and means of solving them. Then full meetings of the Association were called, the program was generally approved and adopted, but when it came to compliance there always seemed to be some one who would violate the rule or fail to comply with it. Others would find it out, report it to others, who in turn would not comply until the others had. Thus failure would result. Patience and persistence were necessary to carry on.

I know, because of my responsibility as President, I called the meetings. I would like to pay tribute to the Trustees who were serving with me, whose names are set out above. The records show that each of them were present at nearly every meeting called during those years. The meetings were usually held in Olympia, as that was a central place, and we always had a suitable place to meet. They served without pay, and in those days they were not even reimbursed for mileage or subsistence most of the time. J. L. Wiegardt and J. H. Doupe had long trips from Willapa Harbor; H. J. Waters, Myron Heuston, and C. W. Overturf likewise from Seattle, or the Harbor. Their trips were often in the winter. Their return home was often in the night, generally in fog or rain. The oyster industry owes much to these and other faithful and devoted men who endured these hardships in their efforts to build a successful industry. But it is with regret that I must say that others who sat comfortably at home were the ones who broke down the results by their criticism and failure to comply with the programs set up and adopted by the majority.

First, on August 26, 1935, the Trustees voted, as a recommendation to the Association, an assessment of one cent per gallon for support of the organization, and one cent per gallon for advertising, *the same to be added to the Price of containers*, withheld by the manufacturer of same who paid to the Association. Also they approved a draft of proposed amendments to the Constitution and By-Laws, containing a modified version of Article VI, Title A, Unfair Methods of Competition from the Supplementary Code of Fair Competition for the Oyster Industry. I felt then, and still do, that a solution to many problems that have arisen in the industry would have been solved by compliance with these rules set out and made a part of the Constitution and By-Laws of the Association. I feel that this was of sufficient importance that it should be set out in full.

### **Constitution and By-Laws Pacific Coast Oyster Growers Association**

August, 1935

-I-

NAME: The name of this organization shall be "The Pacific Coast Oyster Growers Association".

-2-

QUALIFICATION FOR MEMBERSHIP: Any one engaged in the growing and/or packing or repacking of that particular specie of oyster known as the "Pacific Oysters", which is a transplant from Japan, shall be eligible to membership in this association.

-3-

PURPOSES: The object for which this association is formed is to develop new and improved methods of propagation, growing and marketing of Pacific Oysters, and foster the development of said industry on the West

Coast of the United States, and secure such scientific information, statistics and data as may assist in the accomplishment of said purposes.

-6-

CODE: The code of fair competition for the fresh oyster industry as approved on March 10, 1934, having been nullified by the decision of the Supreme Court, and members of the industry feeling that certain provisions of the code were of great benefit to the industry, the following provisions thereof are hereby incorporated within the constitution and by-laws of this organization and members of the association hereby adopt the same and agree to abide by the same.

## **DEFINITIONS**

Wherever a term is used, the definition thereof contained herein shall apply to the fresh oyster industry. As used herein:

(a) The term "fresh oyster industry" means:

1. The cultivation or catching of oysters.
2. The packing or repacking and wholesaling of fresh oysters, in, from, or near localities of cultivation or capture; or
3. The wholesaling of fresh oysters from or near localities of cultivation or capture.
4. The term "oyster association" means "The Pacific Coast Oyster Growers Association".
5. The term "origin" means the waters from which the market oysters were taken.
6. The term "market oysters" means oysters offered for sale or sold for human consumption.
7. The term "broker" means any independent sales agent who performs the services of negotiating the sale of fresh oysters for and on account of the seller as principal and who is not employed or established by or affiliated with the purchaser or any purchasing agency, directly or indirectly, and whose compensation is a commission or brokerage paid by the seller.

## **UNFAIR METHODS OF COMPETITION**

1. The following practices constitute unfair methods of competition, and it shall be a violation of the constitution and by-laws of this association for any member of the industry:

- (a) **PRICE BASIS:** To quote prices or make settlements in payment of fresh oysters on any basis except f.o.b. shipping point, or cost and freight destination. All such prices and settlements shall include the cost of packages and original ice.
- (b) **CREDIT TERMS:** To make quotations or contracts for the sale of fresh oysters, except those used for seeding or transplanting purposes, without specifying therein payment in full within 10 days from date of receipt of product by the purchaser.
- (c) **COMPLIANCE with SPECIFICATIONS:** To invoice fresh oysters without giving in the invoice all information necessary for a complete understanding of the transaction, including size, origin, price, quantity, terms of payment, and place of shipment.
- (d) **CONSIGNMENT:** To ship products of the fresh oyster industry for sale on consignment.
- (e) **BROKERAGE FEES:** To allow any part of any broker's fee to inure directly or indirectly to the benefit of any purchaser.
- (f) **SIZE STANDARDS:** The association shall from time to time adopt size standards or grades, and to use any other size standards or grades than those adopted by the association shall constitute unfair competition.
- (g) **UNITS OF MEASURE:** To settle accounts or quote prices on any basis other than U. S. Standard gallons for fresh oyster meats; or other than U. S. standard bushels, standard oyster sacks, or count, for market shell stock. All packages shall plainly show contents in terms of the above units. Each settlement of account and each

price quotation shall show the origin of such meats or shell stock.

(h) CURRENCY: To settle or accept settlements of accounts in other than United States currency or its money equivalent.

(i) REFERENCE TO COMPETITORS: To falsely impute to competitors dishonorable business conduct, inability to perform contracts, or questionable credit standing.

(j) SALE BELOW COST: To sell fresh oysters at less than cost as determined pursuant to the principles of the cost finding and/or estimating methods provided for herein.

(k) FILING OF PRICE LISTS: To fail to file with the executive secretary or other official under the directions of the directors at the opening of each season his prices on all grades of fresh oysters, and to fail thereafter immediately to notify the directors of any change in said prices.

(l) SALE BELOW FILED PRICES: To sell fresh oysters below his filed prices; provided however, that any member of the fresh oyster industry who desires to sell oysters commonly known as "distress oysters" shall prior to placing the same on the market take the matter up with the executive secretary or other proper officials of the association with a view of working out a plan of sale which will not precipitate a price war or otherwise disturb the markets.

(m) FALSE ADVERTISING: To publish advertising (whether printed, radio, display or of any other nature), which is false or misleading in any material particular, to misrepresent any product of the industry (including, but without limitation, its use, trade-mark, grade, quality, quantity, origin, size, substance, character, nature, material content or preparation) or credit terms, values, policies, services, prices, or the nature or form of the business of a member of the industry.

(n) MISBRANDING: To brand or mark or pack any product of the industry in any manner which is intended to or does deceive purchasers with respect to the brand, grade, quality, quantity, origin, size, substance, character, nature, material content or preparation of such product.

(o) DESTRUCTIVE PRICE CUTTING: To engage in destructive price cutting.

(p) SECRET REBATES: To secretly pay or allow rebates, refunds, credits, or unearned discounts, whether in the form of money or otherwise; or to secretly extend to certain purchasers special services or privileges, not extended to all purchasers under like terms and conditions.

(q) COMBINATION SALES: To require that the purchase of any goods be prerequisite to the purchase of any other goods.

(r) COMMERCIAL BRIBERY: To give, permit to be given, or directly offer to give, anything of value for the purpose of influencing or rewarding the action of any employee, agent or representative of another in relation to the business of the employer of such employee, the principal of such agent or the represented party, without the knowledge of such employer, principal, or party. This paragraph shall not be construed to prohibit free and general distribution of articles commonly used for advertising except so far as such articles are actually used for commercial bribery as hereinabove defined.

(s) FREE DEALS: To grant free deals, whether in the form of money, money's worth, service, or the practice of acceptance of collect communication charges, or otherwise.

(t) REVERSAL OF COMMUNICATION CHARGES: To engage in the practice of sending or accepting reversed telephone or telegraph or radio message charges in the obtaining of quotations or the closing of transactions, where each charge is not specifically authorized in advance by the addressee named in the message, and where such charge is not afterwards assumed and paid by the sender.

(u) DISHONEST ACCOUNT OF SALES: To render dishonest account concerning sales of products of the industry.

(v) RETURNS AND ALLOWANCES FOR CONTAINERS: To grant returns or allowances in money or money's worth for packages or containers to be returned and to purchase packages or containers from customers, if the return or allowance in question or the purchase price in question constitutes more in amount than the actual value of the packages or containers in question, or if the packages or containers for which the allowance has been made or the purchase price has been fixed are not actually returned, or delivered.

(w) To render false invoices, statements of account, orders or acknowledgments; and to falsely report sales, whether or not the accounting concerning such sales is accurate.

### **DIRECTORS - Powers and Duties**

The directors of this association shall have duties in addition to those heretofore set out as follows:

- (a) To make such surveys or investigations as may be necessary to ascer conditions in the fresh oyster industry and to formulate a plan for the effective distribution of the products of the fresh oyster industry designed to promote stable marketing conditions and standards of sanitation and quality, including an investigation of the cost of Production, packing, marketing and any other costs entering into the production and sale of oysters.
- (b) To formulate an accounting system and methods of cost finding and/or estimating capable of use by all members of the fresh oyster industry. After such system and method have been formulated full details concerning them shall be made available to said members.
- (c) To require each member of the fresh oyster industry to file his prices from time to time with the directors or some one named by them, together with such information relating to tems of sale and discounts necessary to a complete understanding of said prices. Said prices and information shall be made available to members of the fresh oyster industry and trade buyers without interpretation or comment.
- (d) The directors may, when authorized by the association, employ an executive secretaty to conduct market surveys, assemble statistical data, co-operate with the members of the association to secure a complete compliance with these by-laws and to perform such other duties as may be required by the directors.

On September 5, 1935, a meeting of the Willapa Harbor oyster growers met in the Chamber of Commerce Building in South Bend. Eleven of the bigger companies signed an agreement to pay the assessments recommended by the trustees. On September 6, 1935, a similar meeting was held in Ocean Park and five others signed the agreement.

About this time the executive secretary, Mr. J. C. Barnes, by request of the trustees, made an eight-day trip to Willapa Bay to secure data. His report shows that he visited twenty-five growers; all but one were in favor of maintaining prices, and all but one were in favor of all oysters being sold through a co-operative agency. Also that in 1934 there had been planted in Willapa Bay 8,473 boxes of seed.

He recommended that a central selling agency be adopted. This recommendation was under discussion for some time. At the request of the trustees, at a meeting held in South Bend on January 22, 1936, I, with the assistance of a committee (Myron Heuston, J. H. Dupe and C. W. Overturf), prepaired and presented a plan of organization of a co-operative selling association. A Constitution and By-laws for its operation accompanied the report. The members agreed to the general plan, but when it got to the details there was much opposition. It was not adopted. I was then requested to prepare a plan for three central selling organizations, one for North Puget Sound, one for South Puget Sound, and one for Grays Harbor and Willapa Bay. These were to be tied together by directors from each district. This was done; after months of paper work and meetings, again when it came to details there was opposition, and failure resulted.

On October 17, 1935, at a meeting of the trustees, Mr. Heuston reported that there were at least three Japanese grower companies who were all alien corporations operating in violation of the anti-alien act of the State of Washington. This lead to legal investigations and lengthy correspondence with the Japanese Consul. This continued for some time and feelings became quite bitter. This feeling was intensified by the fact that these companies were receiving much free seed or commissions on seed sales, by reason of which they undersold American growers. It looked as though the Japanese in the oyster business here were, through encouragement and aid of the Japanese Government, trying to get control of our oyster industry. However, no action was taken. It proved to be one of the under currents pointing to war that was felt in all parts of the west, the

rumbling of the gathering clouds which later burst forth in the attack on Pearl Harbor.

During these months there was much price cutting. The oyster growers had agreed to pay the assessments for the upkeep of the Association but failed to do so. The executive secretary was spending most of his time trying to collect, but hardly enough came in to pay his small salary.

At a trustees' meeting held on November 29, 1935, Mr. J. C. Barnes resigned. Minno Bradshaw was appointed to fill the vacancy. She had been stenographer for the Code organization and was familiar with the duties required.

At the trustees' meeting on January 22, 1936, the question of buying seed through agents who were also Japanese oyster growers came up again. The president reported that the Japanese seed growers in Japan had organized a cooperative association, the "Japan Cooperative Seed Oyster Export Association", who would sell all seed oysters grown in Japan; that Mr. Yamashita would be in control of all oyster seed sold in this country, who would have the following agents for the different districts: Mr. Murakami of Long Beach, Mr. Charles D. Murikami of South Bend, Mr. K. Kanazawa of Seattle, and Mr. D. Fujii of Seattle.

This would put a Japanese grower in each district, who would, in the opinion of the trustees, be getting their own seed as commission for sales made to their competitive American growers and enable them to sell cheaper and thus control the markets. This was pointed out as in direct conflict with the wishes of the Association. As I have previously related, a resolution had been adopted that no seed should be bought from an agent who was an oyster grower. Also the protest which had been expressed by the committee who had met with the Japanese Consul in January, 1935.

The president further said that he had filed a protest pointing out these facts and requesting an early meeting with Mr. Yamashita, the Japanese Consul and the trustees of the Association. A motion was made and passed that such a meeting be insisted upon to be held at the earliest possible date.

Inasmuch as a letter to the Department of Agriculture, Imperial Government of Japan, containing the same material, will follow later, I shall not include Yamashita's letter here.

### **A New Era Develops**

To sum up conditions at the end of 1936, frequent meetings and a tremendous amount of work seemed to have failed. There was enormous over-production of oysters. There were many oyster growers and packers who were forced to liquidate. The price of oysters remained around \$1.10 per gallon for very large of AA grade to \$1.50 per gallon for small or C grade. Repeated efforts to increase the price had resulted in chiseling by some, either the Japanese because of the seed situation I have described, or because of liquidation, or because of an effort to get the other growers' market, and the price in some instances went as low as 60 cents per gallon. The statistics we had gathered showed that the cost of production was much more than that. These conditions resulted in despair and in many growers and packers going out of business. I know by my own experience. In that 1935-1936 season the Rock Point Oyster Company marketed around 50,000 gallons of oysters and at the end of the season we had over \$1,000.00 loss for the year.

These conditions caused association membership to drop, and even the Trustees began to be absent at their meetings. We had no funds to pay a secretary, and all the business was done through my office. I must also have been discouraged, for I find in my files a copy of a letter I wrote the Trustees explaining the situation and indicating that the association would die a natural death unless something was done to revive it.

This brought a welcome response from the faithful ones, especially my good friends, John Wiegardt, Matt Mathias, J. H. Doupe, and C. W. Overturf. We got together and decided that we needed re-organization. To put the association on its feet we must have a reason that would merit enthusiastic support; the plan must include the employment of a high class executive secretary with funds sufficient to pay his salary and office expense. They asked me to go to work on it.

The first thing was to find the man most suitable and available, for secretary. In that, more than any other duty I performed during the fifteen years I was President, I feel that I did a good job and performed a service that has proven to be of much lasting value to the industry. His name is Charles R. Pollock, who is and has been from that time the Secretary Treasurer of the Pacific Coast Oyster Growers Association.

My first acquaintance with Mr. Pollock had been when he was appointed fisheries collector for the State Treasurer, Clifford A. Babcock, in the Hart administration in 1921. Next he held that office under E. A. Seaburg. Upon the death of E. A. Seaburg he was appointed Acting Supervisor of Fisheries, which was made permanent in 1926. He had continued as supervisor until 1933. During these years he had shown deep interest in the Olympia oyster as well as the Pacific oyster. In 1925 he reappointed Trevor Kincaid as biologist to study Pacific oyster culture in Samish Bay. Since 1933 he had been engaged in various positions connected with fisheries, all of which gave him background to fill the position of secretary of the Pacific Coast Oyster Growers Association.

In September, 1935, when we were planning an advertising program, Charley was connected with the wholesale Fisheries Association in Seattle. I had written to him about joining with them in an advertising program. Without cost to us, in September, 1935, he prepared and furnished us a 25-page plan or treatise on the subject; it was a most comprehensive survey. It showed his deep interest in and knowledge of both fish and oysters and the marketing of them.

During the N.R.A. Code operation he was consultant and Seattle representative of the Pacific Coast Oyster Growers Association. I had such confidence in his interest in oysters and the value of his counsel that I had invited him to several of our meetings, and as previously stated he had attended at my request the meeting we had in Seattle with the Japanese Consul.

Through the year I had known him he had been economical, thorough and efficient in administrative work. just what we needed.

I immediately contacted him to find out if he would be available. He promptly answered that if he could be of service to the oyster industry he would be happy to accept a proposal. At the next Trustees meeting I made a report of the above facts and recommended his employment, which recommendation was adopted and he was promptly employed and put to work with office in Seattle.

On November 1, 1937, I sent him his credentials as follows:

To Whom it May Concern:

This will introduce to you Mr. Charles R. Pollock who was, on October 21, 1937, elected Secretary of the Pacific Coast Oyster Growers Association. We are undertaking to re-organize and strengthen the association and any courtesies extended to him in his work will be appreciated.

The objectives of the association will be set out and mailed to growers and packers of Pacific oysters immediately after a meeting of the directors to be held on Thursday, November 4, 1937.

*Very truly yours,*

E. N. STEELE, *President*

PACIFIC COAST OYSTER GROWERS ASSN.

Mr. Pollock came to us just in time to enter the battle to secure the agency for the selling of seed in this country. It developed about this time that we had stirred up in Japan a rivalry between the seed growers there, on the one side, representing the co-operative seed oyster export association, with Mr. Yamashita, as American agent, and a sub-agent in each oyster growing district. He would not sell through our Association. At a Trustees meeting held in Olympia on November 4, 1937, I presented a report as to a proposal of the Miyagiken Seed Company of Japan. Mr. Nishimura and Mr. Nakata, both officers of that company, were present. They proposed that their group constitute our Association as its American salesman of their seed. We were to secure pledges from a minimum of 60% of our growers to buy through our Association, and our entire order was to be placed with them. The entire maximum of seed was to be limited to 30,000 cases for the year 1938. This was to meet our desire to limit plantings and prevent the heavy surplus. They were to pay our Association 10 cents per case for furnishing the orders, \$500.00 of which they had made as an advance payment. The quoted price for seed was \$3.50 per case F.O.B. American port.

The proposal was accepted, and the secretary instructed to proceed at once to secure pledges for orders.

On November 5, 1937, in accordance with directions of the Trustees, I wrote a letter to the Department of Agriculture, Imperial Government of Japan, and sent copies as directed to Frank Bell, U. S. Commissioner of Fisheries, and the American Ambassador to Japan; it was long and I hesitate to set it out in full, but will do so as it covers so completely the facts and the entire situation connected with securing the sale of seed through our Association. We had been working on it for a long time, and its final outcome has been of much importance to the Pacific Coast Oyster Growers:

THE PACIFIC COAST OYSTER GROWERS  
ASSOCIATION  
202 First National Bank Building  
Olympia, Washington

November 5, 1937

The Department of Agriculture  
Imperial Government of Japan  
Tokyo, Japan

Gentlemen:

This letter is written under instructions of the Directors of the Pacific Coast oyster Growers Association and in accordance with a motion unanimously passed at a meeting of said Directors held in Olympia, Washington, on the evening of November 1, 1937.

**SUBJECT:**

The purpose of this letter is to bring about a new condition in the sale of Japanese oyster seed in the United States and Canada so that the price may be stabilized, the shipping of seed from Japan controlled by the government, the sale of seed in America sold through new agencies to the end that the grower of seed-oysters in Japan may receive a price sufficient to enable him to make a reasonable profit, and to the further end that the growers of oysters from said seed in the United States and Canada may be able to sell said oysters at a price sufficient to make a reasonable profit.

## **HISTORY OF THE BUSINESS:**

The development of the industry of preparing seed-oysters in Japan for exportation, and the development of the industry of growing the seed in America to supply the fresh oyster markets and the canned oyster markets, has been entirely developed over a period of fourteen years and the principal part of the development during the past seven or eight years.

It soon became apparent that the waters and tidal areas in America were so well adapted to the growing of these oysters, and the production in gallonage could be increased so rapidly that excessive planting of seed would cause a destruction of the price structure. During the early years the prices descended rapidly from \$3.60 per gallon until during the past two or three years oysters have often been sold in the cities at \$1.00 or less per gallon.

It has been impossible to increase the markets as rapidly as the production has been increased even with these very low prices and today further expansion of the markets is almost impossible so far as the fresh oyster industry is concerned. It is impossible to go East beyond a certain point because of increased express rates and competition with the Eastern Oyster grown on the Atlantic Coast. The population on the West Coast is not dense and the amount of oysters consumed per capita on the West Coast is now greater than in other parts of the United States.

In the beginning seed oysters were sold for cash at about \$5.50 per case. The development of the production of seed seemed to grow very rapidly and in the competition for seed orders in this country the price of seed went down rapidly and many thousand cases were sold to those having enthusiasm and desire to expand rapidly and who did not have cash to pay for seed, resulting in very heavy losses to the seed growers.

## **RESULTS:**

By the year 1935 the heavy losses to the seed producers in Japan, and the failure of the industry to make a profit on this side, brought about a meeting with the Japanese Consul in Seattle, Washington, which was attended by representatives of the seed growers and by members of the Pacific Coast Oyster Growers Association representing the oyster growers. This resulted in an understanding that the seed growers in Japan should undertake to organize the seed growers and export seed through one agency, and that in America the seed oysters should be sold through an organization representative of the oyster growers in order that it might be sold at a uniform price on uniform terms, giving equal opportunity and fair treatment to all growers.

The seed growers of Japan did so organize and a group of gentlemen who had previously been exporters, associated themselves together under the name of "Japan Cooperative Seed-Oyster Export Association", and sales of seed under government sanction from Japan were confined to sales through said association. However, said export association failed to accept the other part of the objective agreed upon in this country and failed to recognize the viewpoint of their customers, the growers of oysters in this country, and instead of permitting the sale of seed to pass through the association representing the legitimate oyster growers in this country, they continued the practice of selling seed through their own agencies, resulting in further abuses similar to those which had resulted in a disastrous condition in this country, to-wit: The selling of seed to certain growers on prices, terms and conditions different from the prices, terms and conditions imposed on others. In 1935 a pretense was made toward compliance with the previous understanding in that certain orders were permitted to pass through the association, but reservations on one pretense or another were made as to certain orders so that the resulting condition was that those who had previously paid cash on a basis of the established price, ordered through the association, and those who had previously received benefits in price and terms continued to receive them, including the American Agent of the Japan Cooperative Seed Oyster Export Association who had become heavily interested as a grower in this country and those whom he termed as "his special friends". Likewise, those who are commonly known in this country as "promoters" who have oyster land for sale and hope to profit through the sale of the land rather than the sale of oysters by buying the oysters on credit



and probably failing entirely to pay for them. They have been able to seed their grounds and sell oysterland at excessive profits, resulting in large quantities of oysters later coming into the market as "distressed stock". This has resulted each year in sufficient quantities of those oysters which never should have been planted and would not have been planted if the seed had not been secured in the manner above stated, coming onto the markets at a price below cost of production to other producers.

### **NEW DEVELOPMENTS:**

The cost of labor in this country has increased rapidly during the past two years. Other costs of operation have increased proportionately. The conditions above set out have kept the markets in such a deplorable state that capital investment is being depleted rapidly and the oyster business is being placed in such condition that if it continues longer no one will have money with which to buy seed.

The Japan Cooperative Seed-Oyster Export Association is composed of men who are not producers of seed-oysters. It is our understanding that they have withdrawn heavy profits from the seed sold in this country, which fact together with the losses, due to failure to collect the cash from all customers, has caused the actual growers to receive a very small amount for the seed-oysters.

### **A NEW AGENCY:**

About a month ago word came to the officials of the Pacific Coast Oyster Growers Association that by reason of the facts herewith set out, the growers of seed in Japan were desirous of establishing in America a new agency and that they had selected Mr. S. Nagano of Chicago, Illinois, Mr. M. Nakata of the M. Nakata Company of Seattle, Washington, and Mr. George Nishimura of the George Nishimura Company of Seattle, Washington, as exclusive agents for the sale of Japanese Oyster Seed in the United States and Canada. The above are all men who have their own business established and are not dependent upon the seed-oyster business for a living. They are therefore willing to make returns to the oyster-seed growers in Japan which would amount to at least twice what they have heretofore received, provided that they can be recognized as the exclusive exporters of Japanese oyster-seed. In other words, if they are placed in the same position as the Japanese Cooperative Seed-Oyster Export Association so that they may control the price and terms at which oyster-seed is sold, they will be able to make returns to the seed growers sufficient that they will make more money than they have heretofore made even though the quantity of seed sold is much less than has been sold before.

Being good business men, these men first investigated the present status of the oyster business in this country. They have become convinced that the key to the whole oyster business is the control of the exportation of seed from Japan and its proper distribution in this country.

These men have produced evidence of the fact that they have been requested by the seed growers association of Japan to become the exclusive agents for Japanese seed in this country, provided however, that the Japanese Cooperative Seed-Oyster Export Association has a further privilege of selling oyster-seed planted in 1937 for 1938 delivery, up to 15,000 cases after which time all rights and concessions of said Japanese Cooperative Seed-Oyster Export Association shall cease, and said above three men become exclusive agents without reservation. These men, realizing the situation of the oyster growers and realizing that it is necessary to do something in this country to put the oyster growers and packers on their own feet if they are to continue to buy oyster-seed at a substantial cash price offered to comply with previous suggestions of the oyster growers, and permit the sales to pass through the Pacific Coast Oyster Growers Association. They delegated E. N. Steele, President of said association, authority to make such a proposal to said association, a copy of which proposal is hereto attached and by this reference made a part hereof.

Said proposal was made to the association at a meeting called for that purpose, held at South Bend, Washington, October 21, 1937, and was accepted.

Mr. Yamashita, the American agent for the Japan Cooperative Seed-Oyster Export Association, was formerly a grower of seed oysters in Japan, although a resident of America. He gave up his seed business and became a member and director of the Japan Cooperative Seed-Oyster Export Association. His position as such has enabled him to get into the growing business here until his interests as a grower probably exceed his interests in the seed business. He is President of the Western Oyster Company and as such has subscribed membership in the Pacific Coast Oyster Growers Association and has been elected a director. He was present at the meeting which authorized and directed the writing of this letter, and agreed that, assuming that the Japan Cooperative Seed-Oyster Export Association has the right to ship up to 15,000 cases and the new agency the right to ship in addition to that, estimated at 15,000 cases, then the Japanese Cooperative Seed-Oyster Export Association should also sell their seed through the Pacific Coast Oyster Growers Association on the same proposal as was adopted by the new agency. This we feel would bring about a new condition favorable to the seed growers of Japan and the oyster growers of the United States and Canada.

**SPECIFIC REQUEST:**

We do therefore request:

FIRST: That the Department of Agriculture in Japan, operating through the Fisheries Department, continue a policy of control over the exportation of seed-oysters to America, but that they do approve the new agency, to-wit: S. Nagano, M. Nakata and George Nishimura, as exclusive exporters of seed oysters, reserving only to the Japan Cooperative Seed-Oyster Export Association such rights and privileges as they may have by virtue of their previous arrangements.

SECOND: That until the growing of oysters in America becomes better stabilized and the markets expanded, the exporting of seed should not greatly exceed 30,000 cases per year and that the plantings of shell for oyster spat should be controlled and limited accordingly.

THREE: That in determining this question the facts above set out be carefully studied and investigated with a view of bringing greater remuneration to those who do the work, to-wit: the growers of oyster-seed in Japan; and stabilizing the business in America of producing oysters from said seed in order that said business may prosper, and as it prospers result in the sale of ever increasing quantities of oysters, requiring additional seed from Japan.

One further thought. It is suggested above that the oyster producers are willing to pay last year's prices in cash for seed under the conditions above set out. If, however, government sanction is to cease and the old state of competitive methods return, then naturally each oyster grower will endeavor to purchase seed at the most favorable price and the most favorable terms that he can receive.

Trusting that this will receive your early consideration, and that we will be advised as to the exact status of the matter, we are

PACIFIC COAST OYSTER GROWERS ASS'N.

Very truly yours,

By E. N. Steele, President

E.N.Steele; MJB

cc-Frank Bell, Commissioner of Fisheries  
Washington, D. C.  
cc-American Ambassador to Japan  
Tokyo, Japan

Without going into detail as to the results from the above letter, and to the various other methods used, suffice it to say that taken together they did bring about a better understanding, especially in Japan.

A three year contract was entered into between the Pacific Coast Oyster Growers Association and the Miyagiken Seed Oyster Importing Company, which had been incorporated here. The terms were as previously stated. Then a battle for seed oyster orders started. Secretary Pollock devoted a lot of his time to securing orders. Advertisements appeared in the newspapers in South Bend, Raymond, and all oyster growing areas. Mr. Yamashita and his sub-agents were also busy, with propaganda to the effect that they were the only ones who had authority to sell oyster seed and that orders given to the Pacific Coast Oyster Growers Association would not be filled, all of which caused confusion and made Mr. Pollock's work more difficult. However, the seed came through on schedule. 14,705 cases of seed were received by association members. The Yamashita agents shipped 14,976 cases. All association orders were paid for in advance of shipment. On June 6, 1938, a meeting was held at the Albie Hotel in Raymond. It was a well attended meeting. The re-organization of the Association had really taken place. It had come to life and was again a strong, well organized and efficient organization. At dinner they were guests of M. Nakata and George Nishimura of their Seed Oyster Importing Company. The principal order of business was to consider a report on their seed.

The Association had sent out a questionnaire to its members. The results showed that each case of seed averaged between 1,000 to 1,200 shell, with from 15 to 50 live spat per shell, compared to counted boxes of competitors seed of from 700 to 800 shell with 15 to 50 live spat per shell. Matt Mathias introduced a resolution commending the Miyagiken Seed Oyster Importing Company, approving the method of consolidating the orders through the Pacific Coast Oyster Growers Association, and pledging our best efforts during the next year to secure a larger number of orders. It was passed unanimously.

Mr. J. H. Doupe introduced a resolution, reciting that Mr. Yamashita had brought over 1,190 cases of seed without orders, and placed them on the Western Oyster Company grounds (his own company) and had shipped without orders 1,000 boxes of seed to Willapa Bay. It condemned that practice and proposed that unless it was stopped we ask that an embargo be placed on importation of any seed oysters from Japan, and that the seed oyster industry in this country be developed to take the place of seed from Japan. It was also passed unanimously.

Although these things were encouraging, yet a dark cloud was cast by the secretary's report.

He stated that wages and other costs of production of oysters had gone up, but the price of oysters remained low. The selling price was below cost of production. This was verified by different oysters growers. Mr. Doupe reported more oysters on the beds ready for market than ever before. Many others concurred with him. It was apparent that the work of the association was cut out for its best efforts if the industry was to live and become a thriving business.

At this meeting Mr. Myron Heuston and M. Yamashita resigned as Trustees. Mr. Heuston had been an active and valued worker for many years. He had been either President, Vice-President or Trustee during most of the life history of the association. Regrets were expressed that other business affairs caused him to resign.

Harry Allen, Tyee Oyster Company of Gig Harbor, and Charles Murakami of the New Washington Oyster Company of South Bend, were elected to fill these vacancies.

As I have stated, the importation of seed for several years had been very heavy. The growth of oysters was good and

the markets, although increasing, had not been built up to accommodate this heavy production.

The following seed was imported to this country, and, of course, the amount of seed is an index to the gallonage of oysters produced. The average production at that time was in excess of 30 gallons per case of seed.

Year	Cases Planted	Approximate Yield
1933	34,741	1,042,230
1934	64,550	1,936,500
1935	71,787	2,153,610
1936	42,953	1,288,590
1937	29,350	880,500
Total	243,381	7,301,430

As it takes approximately three years to produce a marketable oyster, in 1938 there were the oysters from the 1934, 1935 and 1936 seed, or about four million gallons, plus the surpluses from former years, or perhaps five million gallons, of which over three million gallons were of marketable size in 1938.

So it is understandable that at the annual meeting, held at the Albee Hotel on August 20, 1938, the principal subject was markets and price.

Although at that time there were 209 members of the Pacific Coast Oyster Growers Association, yet there were only 35 present at this annual meeting.

Every conceivable method of getting rid of some of the surplus oysters was advanced. Many of those present spoke of the need, but most of the suggestions required funds to carry them out. The money we had received through the sale of oysters was only enough to carry on the adopted plan of retaining Mr. Pollock and the payment of office expenses. Mr. Matt Mathias moved that the secretary write the State Director of Agriculture and our Congressmen for assistance in asking that the Director of Surplus Commodities place oysters on their list of surplus commodities. This was later done but without results.

There was much discussion as to oyster prices for the coming season. On motion of J. L. Wiegardt the market price was to start at \$1.10 per gallon for AA, ranging up according to size to \$1.35. On Ted Holloway's motion shell oysters were to start at \$1.50 for a two bushel sack, or in bulk at 50 cents per opened gallon.

### **Election of Officers for 1939**

Trustees, Willapa Harbor District:

Charles Muricami, Arthur Overturf, J. H. Doupe, and J. L. Wiegardt

Grays Harbor District:

F. W. (Matt) Mathias

Puget Sound District:

E. N. Steele and Harry W. Allen

President, E. N. Steele; Vice-President, J. H. Doupe; Secretary-Treasurer, Charles R. Pollock.

The first victory had been won. The members of the association had at last been able to consolidate their orders for

seed, had received delivery of good seed and had by a resolution given it their stamp of approval. In addition to other benefits they had received funds sufficient to carry on the program they had planned, a central office and an efficient secretary treasurer. Now they had turned to the ever present problem of markets. The membership assumed that the question of seed was settled, but it was not. But few of the members have ever known or realized the unremitting effort that was required to hold the fort.

Looking back upon it now, in the light of history, it appears that in Japan there were two opposing factions, the military, which wanted to get control in that country of industries, among which was the oyster industry. The other faction, those who were most interested in increasing the sale of seed for profit without regard to control of the industry. The former were the more powerful group. They had secured the Government support and had sanctioned the Japan Co-operative Seed Oyster Export Association in its appointment of M. Yamashita and his sub-agents in the different oyster growing areas. Now it appears that Mr. Yamashita was correct in many of his published and spoken statements; likewise that we were correct in our conclusions as to the purpose.

The other factions were also men of much influence in Japan. But the leaders were not in the oyster business but Japanese business men, Mr. Nagano in Chicago, Mr. M. Nakata and Mr. Nishimura, both in Seattle. This group had incorporated in Japan as seed oyster exporters. Later they incorporated here as seed oyster importers.

This group, no doubt, played their cards well with the Japanese Government official. The meeting we held with the Japanese Consul in Seattle and the letter we wrote to the Department of Agriculture of Japan, including copies thereof sent to the American Ambassador to Japan and to Frank Bell, United States Commissioner of Fisheries, which letter I have set out in full, no doubt had more effect than we knew. At any rate these men were given a license to export and sell to the Pacific Coast Oyster Growers Association, but the other organization was also retained. In other words, they carried water on both shoulders, kept peace with both sides.

But it did not end there. Instead of accepting this compromise, the Japanese Cooperative Seed Oyster Exporters Association and their backers in Japan continued their efforts to eliminate the other group.

In November, 1937, I had gone to Chicago and spent two days with Mr. Nagano. He was confident that we would get the seed for 1938 spring delivery, but he was not so confident about the future. During the following year we continued to press for a contract. One of their firms made a trip to Japan. Still nothing settled. The files show a stream of correspondence. We made a firm proposal, and put on all the pressure we could, but it was not until December that we received an affirmative answer. This was confirmed at a special meeting on December 27, 1938. It contained the same provisions as the previous year except that we were to receive 20 cents per case instead of ten cents per case but no advance cash. Two or three of our members advanced expense money to carry on.

In the meantime Mr. Yamashita and his agents were taking orders, and advancing their propaganda, both in print and by word of mouth. They kept the oyster growers confused and in doubt as to whether they would get seed except through them. But Mr. Pollock had also been busy and had secured estimates of the needs of members so that the orders were soon assembled, and in the spring of 1939, 15,747 cases of seed were delivered.

This seed was not as good as the seed in 1938 and on June 19, 1939, a meeting was called to consider a claim for reimbursement for the poor seed. A committee had been appointed to investigate. They reported they had visited the beds, that some seed was poor, other good, and they were unable to get proof as to whether the number of seed per case was in accordance with the contract. Further, that the ship had encountered hot weather on the voyage, and because of a storm had been held three days at the entrance to Grays Harbor. The claim was dropped.

The *annual meeting* was held on August 16, 1939, at the Albee Hotel in South Bend. It was well attended. Among other things of interest it was moved by Mr. Doupe and seconded by John Wiegardt that recipe folders be published,

and that \$1,000.00 be set aside from sale of seed for advertising, one-half for fresh oysters and one-half for canned oysters.

The matter of a co-operative sales organization was again discussed.

The legislative committee reported that the last legislature had passed the "*Fair Trade Practice Act*", which was intended to cure many of the unfair trade practices we had for so long been fighting. One of them was selling below cost of production. As we would come under this law a committee was appointed to investigate and report at the next meeting the cost of producing oysters.

At a called meeting held October 25, 1939, it was announced that 25,000 recipe folders had been ordered. Further discussion was had in regard to the Fair Trade Practice Act, but the committees were not ready to report.

On October 31, 1939, a meeting was held at the Hungerford Hotel in Seattle. The announcement had been made that the Prosecuting Attorney of Seattle, Mr. Tammany, would address the meeting on the Fair Trade Practice Act, and there was a large attendance. Much enthusiasm was shown and many questions asked. Money was voted to enable committees that were appointed to go out and get evidence against offenders.

During the year we had been frustrated again and again in securing a seed contract for delivery in the spring of 1940. But we had finally succeeded, and the contract was confirmed at a general meeting held January 12, 1940. The difficulties we had encountered this time were reported. Some difficulties had arisen between members of the Miyagiken Seed Oyster Company resulting in their failure to secure the agency for the sale of seed in the United States. It seems that Mitshi and Company, Ltd., of Japan, now had control of the exporting of seed. The Sendai Oyster Seeds, Inc., a Washington corporation, with offices in Seattle, were given the agency here. I had run down these facts, contacted them and secured the contract practically on the same terms as for 1939, except we were to receive thirty cents per case instead of 20 cents, and the price was increased \$1.00 per case on unbroken seed and \$1.20 on broken seed. The seed, 13,498 cases, came through fine and was good seed.

At this meeting it was announced that a test case had been brought to test the Fair Trade Practice Act we had gone to Portland and made arrangements to join with Oregon, who had passed a similar law, in the enforcement as it applied to the oyster industry.

On August 10, 1940, the annual meeting was held at the Albee Hotel in South Bend. It was reported that this year not so much trouble had been encountered in securing the contract for the 1941 delivery of seed oysters, which was confirmed on the same terms as the 1940 seed delivery. It was with the Sendai Oyster Seeds, Inc.

The same trustees and officers were elected for 1941.

As I have stated the oysters had been selling at quoted prices of from \$1.10 to \$1.35 per gallon or less for many years, and this continued until shortly before war was declared against Japan on December 7, 1941.

As an illustration of the desperate condition oyster growers were in I will relate an experience of the Rock Point Oyster Company. In the spring of 1938 we decided something had to be done. For many years we had been swapping dollars, coming out even or in the red each year. 1937 had been an especially hard year. We had a loyal crew. One evening they were our guests for dinner at a little oyster house near our plant, the "Oyster Shell". We explained the situation to them, and asked them if they would be interested in taking over the oyster growing and packing operation, they to form a co-operative group and operate on a share the profit basis. The only alternative we could see was to shut down. Out of this suggestion a plan was worked out under which we operated successfully for over three years. They immediately took a personal interest in the business. Efficiency resulted. When needed

they put in longer hours. We all made a little money.

In the latter part of 1940 things began to get a little better. Under the Fair Trade Practice Act Mr. Pollock had been spending most of his time gathering data. The law provided that no sale could legally be made at a price less than the average cost of production in the industry. Before a suit could be filed in enforcing the law we had to have the facts. This caused the chiselers to be more cautious, and it was soon felt in a better price. On October 9, 1941, a letter was sent out by the secretary, announcing that the market price for oysters, commencing October 15, 1941, would be as follows:

PACIFIC OYSTERS	Container Sizes				
	Grades	Gallons & 1/2 Gals.	Quarts	Half Pints	
	AA	\$1.50	\$ .40	\$ .21	\$ .12
	A	1.65	.44	.23	.13
	B	2.00	.52	.27	.15
	C	2.15	.55	.30	.16
	D	2.40	.62	.32	.17

Again referring to the Fair Trade Practice Act, Chapter 221, Session Laws of 1939, the test case went to the Supreme Court, causing much delay in its enforcement. The Court validated the act. The prices as above shown began to rise, causing less interest in its enforcement. War broke out a month later and no case was brought under the act.

**CHAPTER VIII**  
**THE WAR WITH JAPAN**  
**ITS EFFECT ON THE PACIFIC OYSTER INDUSTRY**

To say the least, the surprise attack on Pearl Harbor, launching us into World War 11, confronted the Pacific Oyster industry with many new problems. We were producing food. In time of war food always becomes one of the most important requirements leading to victory. Millions of men were taken out of industry and into the armed forces. The problems confronting us will be treated later as I progress.

The industry had gone through critical times before. First, the early years when the Pacific oyster was being introduced at a time when anything from Japan was very unpopular. Second, the period of the depression, N.R.A. days. Third, the period of rapid expansion of growing areas, the rapid increase of seed planting and consequent oyster production, without an equal increase of markets, resulting in vast surpluses of marketable oysters. As I have attempted to set out in a factual picture in their chronological order, all these critical conditions had been met and worked out by a group of oyster growers, some of whom had at great sacrifice and unremitting efforts, kept the industry alive. Through its representative association, the Pacific Coast Oyster Growers Association, they had bravely carried on. At the time war broke out the association had a membership of seventy-two growers in the State of Washington, and were well organized to cope with the problems as they arose.

Knowing, of course, that the oyster industry, along with producers of all kinds of food, would be called upon to supply its share, two things came to the mind of every oysterman.

First, the fact that they had on their beds the vast surpluses of oysters which had accumulated from the very heavy planting in 1934 to 1937 inclusive. The plantings since then, as I have pointed out, had been cut down and were as follows:

1938 -----	14,705 cases
1939 -----	15,747 cases
1940 -----	13,493 cases
1941 -----	10,422 cases
TOTAL -----	54,367 cases

This meant that there were on the beds, of various sizes and ages, over one and a half million gallons of oysters which could be marketed over a three years period.

Second, it was apparent that our seed supply from Japan would be cut off during the war. How would we keep our beds without seed? By the end of the war it looked as though our beds would be stripped. We would in fact be lucky if we could operate that long.

The first condition was good, the second looked very bad.

But there is an Almighty and Eternal guidance to the elements of nature in which we do not always have sufficient faith. Previous to this time sets of seed had taken place both in Willapa Harbor and in Quilcene Bay, Dabob Bay and other places in Puget Sound. In another chapter the history and extent of natural set in this country is told, but for some years prior to the war, for several reasons, natural set had not been relied on. During the war, by act of Providence, sets did take place, and did much to sustain production during the war.

Another number one question which immediately arose was price. But this time it was just in reverse of the problem



in the past. This time it was a matter of holding the price down.

We had been going through a complicated investigation of the cost of producing and packing oysters to see if we were in violation of the Fair Trade Practice Act. Its purpose was to prevent selling at less than the cost of production. We found that many were in violation. An average cost was found to be \$1.1357 per gallon. Many sales had been made below that. But before any actions had been started to enforce the law conditions had improved, and just before the war the new market price for oysters was \$1.75 per gallon for AA, \$1.80 for A grade, \$2.25 for B grade, \$2.40 for C grade and \$2.50 for D grade, ranging from AA or very large to D or smallest grade.

Very early in the war the "Office of Price Administration" had been established in Washington, D. C., and the entire country placed on a price control basis. Charles W. Triggs was appointed head of the Fish Section, Food Price Division.

Not all industries were required to file prices and become subject to the red tape which was necessarily required of those placed under it. Where an industry could show that by voluntary action it would hold prices down it was allowed to so operate. The Pacific Coast Oyster Growers Association held a meeting. A motion made by F. W. Mathias was passed, authorizing the President to write Mr. Triggs and advise him that we desired to assume the responsibility of voluntarily holding prices down. That was done, and the following letter received:

OFFICE OF PRICE ADMINISTRATION

Washington, D. C.

September 25, 1943

Mr. E. N. Steele, president  
Pacific Coast Oyster Growers Association  
202 First National Bank Building

Olympia, Washington

Dear Mr. Steele:

We are in receipt of your letter of September 17 and note the voluntary action on the part of your Association to hold prices down. This is commendable and we hope it will have the desired results.

This action takes care of oysters only at the producer point and would not prevent secondary wholesalers and retailers from selling at high prices. For this reason it will be necessary for us to have some control by regulation and, as stated, we will advise you.

We would appreciate if you can supply us with a breakdown of cost figures. Such information is valuable to us in writing regulations.

Very truly yours,

Chas. W. Triggs

Chas. W. Triggs  
Head, Fish Section  
Food Price Division

On October 14, 1943, in response to action taken by our Association I wrote another letter as follows:

October 14, 1943

Office of Price Administration  
Charles W. Triggs, Head, Fish Section  
Food Price Division  
Washington, D. C. 25

Dear Mr. Triggs:

I received your letter dated September 25th a few days ago, but delayed answering it until after a meeting of the Association which had already been called for yesterday, October 13th.

The Association met at Raymond, Washington, and was well attended by oyster growers and packers from Portland and Coos Bay, Oregon, and all localities in the State of Washington.

The meeting was attended by a purchasing agent for the army, navy and other branches of the armed forces who requested cooperation in supplying heavy demands for oysters by the armed forces. The association unanimously agreed to cooperate. Each grower and packer pledging 60% of their output to be furnished to the armed forces and some growers agreed to supply 100% of their output to the armed forces.

The Association also unanimously agreed to voluntarily hold down their prices and use every effort to prevent secondary wholesalers and retailers to sell at higher prices.

I am very much gratified at this action voluntarily taken by the members of our industry.

I personally know something of the difficulties that you are attempting to overcome. The relation between increasing prices and inflation; and the responsibilities of the O.P.A. to the buying public and the government as a purchaser. I have been chairman of the Price Ceiling Panel of the O.P.A. in this district from the beginning and this has brought me in touch and caused me to realize the importance of proper administration of your office. I have reason to believe that those in the oyster industry feel the same about it. We will ask nothing more than fair treatment. I have been in the Pacific Oyster Industry for over 20 years and was President of the Pacific Coast Division of the N.R.A. Oyster Code. I therefore feel that I know something of the problems, conditions and operating expense of the oyster growers on this coast. As stated before, I feel that if the industry can voluntarily prevent raises in price, a ceiling imposed by O.P.A. would be detrimental rather than beneficial.

The Association authorized me to appoint a committee to furnish your office with a break down of cost figures as requested in yours of September 25th. The committee will immediately take steps to secure the cost figures of each operator which will be assembled and put in proper form for your use. These will either be furnished by mail to your office or the committee would be glad to meet with a representative from your office to go over them.

There are several matters which should be presented to you and which should be taken into consideration at the time

you are considering the establishment of ceiling prices if you decide to do that. These matters are peculiar to this industry and particularly those resulting from the fact that our seed supply from Japan was cut off by the war causing us new and additional expenses in carrying on the business which have not yet greatly entered into our production cost but which will enter into it within the next year. I would like to have your views at the proper time as to whether these should be presented to you personally at your office or by mail. The Association seems to feel that I should go back and present the matter if it should be considered advisable. My personal opinion is that I would prefer to have your views on the matter first.

The committee will proceed with their work and await your reply as to further action in the matter.

Very truly yours,  
PACIFIC COAST OYSTER GROWERS ASS'N  
By E. N. Steele  
E. N. Steele, President

The committee was appointed and furnished a break down on costs of production. It showed a considerable increase in costs, as everything going into oyster production has gone up, labor, boxes, containers, etc. The prices at which oysters were selling, both to the public and to the armed forces, showed only a moderate profit.

On September 14, 1943, we held a meeting in the cannery of Weigardt Brothers at Ocean Park. At that time most, if not all, of the companies operated by Japanese had been closed. Most of the other principal oyster growers and packers were present, Mr. Arnold Waring of the Haines Oyster Company, stated that the army desired to buy all the oysters they could get and he desired the cooperation of the oyster growers in filling these orders during 1943-1944 season. The prices quoted were \$3.25, \$3.50 and 13.75 per gallon for the three principal grades.

At this meeting Mr. Waring reported he had been in touch with Mr. Triggs of O.P.A. and he did not believe ceiling prices would be imposed if prices were kept at their present level. The president also reported he had wired Mr. Triggs in addition to his letters and had received the following wire from him: "You will be advised before oyster ceilings established. Your recommendations will be considered." The president offered it as his opinion that if all those present, who represented a large percentage of the growers and packers, would use their influence with wholesalers and retailers to freeze their prices, ceiling prices would not be imposed on the industry. All present pledged themselves to that policy.

The following letter was then written to Mr. Triggs:

September 17, 1943

Office of Price Administration  
Washington, D. C.  
Attention: Charles W. Triggs

Gentlemen:

Thank you for your wire advising me that we will be informed before oyster ceilings are established; further that our recommendations will be considered.

Since receipt of your wire, the Pacific Coast Oyster Growers' Association has held a meeting in which practically

all the growers were either present or represented. A motion was made and unanimously passed that the industry place its own ceiling upon the prices of oysters, that each company refuse to increase its own prices beyond present level and use every effort to prevent anyone else from doing so. I feel confident that the oyster growers can establish full justification for their present prices but they have a deep sense of responsibility to keep prices from going beyond their present level. The present prices are \$3.25, \$3.50 and \$3.75 per gallon respectively for the three principal grades of oysters used. They also took action to cooperate in a plan furnishing the Army and Navy with oysters at prices corresponding with the prices above quoted. The grades required by the Army are some different from the grades adopted and used for many years in sales to the consuming public.

I trust this action may meet your approval. We would appreciate being advised if the Association can be of assistance to the O.P.A. in carrying out its price policies.

Very truly yours,

E. N. Steele  
E. N. Steele, President

#### PACIFIC COAST OYSTER GROWERS ASSOCIATION

On October 13, 1943, the Pacific Coast Oyster Growers Association held another meeting at the Raymond Hotel in Raymond. Mr. Waring had brought with him Mr. Hansen, purchasing agent for the Army and Navy, who said they would buy all the oysters they could get at \$3.75 per gallon, frozen and delivered in Seattle. He insisted that every producer of oysters furnish at least 60% of their output.

In November there was another called meeting at the Wiegardt Brothers plant. Mr. Hansen was again present and with him Captain Smith from Chicago, a procurement officer for the purchase of oysters for the armed forces throughout the United States. They congratulated the industry on its voluntary agreement to supply the armed forces with 60% of their output, but that some were not doing it. They said they had authority to requisition 100%, but that if all producers would enter into a written contract to furnish 60% on a voluntary basis it would be acceptable. An arrangement was made under which Mr. Hansen sent out the contract to the producers. These were to be filled out, signed and returned to Mr. Hansen and checked by the president and Mr. Waring, who were delegated with authority to see that all had signed.

This plan worked out satisfactory. On August 29, 1944, a meeting was held in Olympia at which arrangements were made for the 1944-1945 season at the same price and terms as the previous year, except that purchases would be on a pound instead of a gallon basis.

Thus our efforts to prevent being placed by O.P.A. on a ceiling price basis succeeded. After the war ended and O.P.A. was discontinued we received a letter of appreciation for our cooperation during the period of its operation.

We had been somewhat handicapped in carrying on this work. In February, 1942, our Secretary-Treasurer, Charles Pollock, advised us that the State had asked him to take a position in charge of the Lake Washington bridge. He stated that he expected to continue his insurance business and his wife would keep the office open. Realizing that there was a shortage of manpower and that Charley felt it his duty to accept this position, we readily approved his plan. He stated that if opportunity offered, when conditions changed, for him to be again associated with us, he would be very happy to accept it. In the meantime he offered any assistance he could render not inconsistent with his work. During the period of that employment we were in frequent touch with him, and when that was over, a

period of about three years (until June, 1945) he was again employed as Secretary-Treasurer of the Pacific Coast Oyster Growers Association' which position he still holds at the time this is being written. His services have been of great value to the industry. He was again chosen and appointed at the Annual Convention held in Olympia in August, 1958. His name will appear many times in this narrative to the end, for he has been a very important spoke in the wheel as it has moved on through the years.

### **At Last the War Is Over**

POST WAR DAYS-The end of the war was a day of joy and celebration, yes and a time for prayer in gratitude for us whose boys had been spared and soon would be home again.

But the story of the Pacific Oyster Industry and the Pacific Coast Oyster Growers Association is of course a different story.

When Mr. Pollock became otherwise employed all the affairs of the Association were centralized in my office. If it had not been that I had a wonderful stenographer and secretary who was familiar with the office work and correspondence of the Association, I do not know how I could have carried on. I was operating my Olympia oyster beds at Oyster Bay, the Pacific oyster beds, the Rock Point Oyster Company at Blanchard, Washington, was chairman of the O.P.A. for Thurston and Mason Counties, as well as President of the Pacific Coast Oyster Growers Association. Not 100% efficiency, yet, as I have tried to set out the facts, we carried on. How happy I was when Mr. Pollock returned to his office and took over. With what joy I loaded the mass of correspondence files and the Association's records in the car, took them to his office and piled them on his desk. And the post war days had much work in store for him and for us all.

At the annual meeting of the Pacific Coast Oyster Growers Association, held in August, 1945, the following officials were elected:

Directors: J. H. Doupe, T. W. Holiway, F. W. Mathias, T. K. Pederson, E. N. Steele, W. Arnold Waring, J. L. Wiegardt; President, W. Arnold Waring; Vice President, J. L. Wiegardt; Secretary-Treasurer, Charles R. Pollock.

The directors asked me to again serve as President. I declined. I appreciated the honor, but I had been president of the Association since 1930 a period of fifteen years. I was tired mentally, and in ill health. In fact under doctor's orders I was scheduled to leave soon for three months on the desert in lower California.

Mr. Waring, of the Haines Oyster Company, was then elected. He was a man of long experience in the oyster business, located in Seattle, and had all the qualifications of leadership, energy and ideas, to make a good President. He also had a Vice-President and a Board of Directors who were old timers and had proved themselves as men well qualified to meet such problems as might come up for their consideration.

Soon after this the Directors did me the honor of electing me to represent the Association on the Board of the National Fisheries Institute. It was my pleasure to attend three of their annual meetings, one in New York, one in Chicago, and one in San Francisco.

One of the first things of importance that came up for their consideration was: *Definitions and Standards of Identity, Quality, and Fill of Containers* before the administrator, Federal Security Agency of the Government. It involved all oysters packed in the United States, and was held in Washington, D. C.

This was of great importance to the Pacific oyster industry. As I have before stated, except in the years that the N.R.A. Code was in effect, no standard of identity was used uniformly by all packers of Pacific oysters. In fact any packer might adopt his own standard or grade. Some packed bed run, or all sizes in the same container; others had different names for different sizes of oysters. The Pacific oyster was graded and grades named entirely differently from Eastern oysters. Their larger oysters, generally called "counts", brought the highest price, For these and other reasons we felt that the hearing, so far as Pacific oysters were concerned, should be held in Seattle in the heart of the industry, where our witnesses could easily attend and where our tests could easily be made and our evidence produced. To make a long story short, this request was finally granted and the hearing set for November 27, 1945.

The Directors, at their meeting held on November 15, 1945, asked me to act as their attorney at the hearing, and assemble the evidence and select the witnesses to be used.

At that time Clarence L. Anderson was Assistant Director and Chief Technologist, Washington State Department of Fisheries. Through our solicitation he was directed by Milo Moore, State Director of Fisheries, to carry on experimental work in the oyster industry concerning the questions that were to be determined at the hearing. These experiments were carried on at the various oyster plants located in Samish Bay, Hoods Canal, and Willapa Bay. Charles R. Pollock, secretary of Pacific Coast Oyster Growers Association, assisted him in this work.

Meetings were held in each of the oyster growing and packing districts and the various points to be covered at the hearing discussed. Witnesses were interviewed and briefed as to their testimony.

At the time and place set for the hearing the following pages of the record show the opening proceedings and the names of those appearing as witnesses.

BEFORE THE ADMINISTRATOR, FEDERAL SECURITY AGENCY

FOOD AND DRUG ADMINISTRATION

In the Matter of:

SHELLFISH: DEFINITIONS AND STANDARDS OF IDENTITY,  
QUALITY, AND FILL OF CONTAINER-RAW OYSTERS, IDENTITY.      Docket No. FDC.43

Place-Seattle, Washington  
Date-November 27, 28, 29 and 30, 1945  
Room 117, Federal Office Building,  
First Avenue and Madison Street,  
Seattle, State of Washington

The above entitled matter came on for hearing, pursuant to adjournment, before the Administrator, Federal Security Agency, at 9:00 o'clock, a.m.

EDWARD E. TURKEL, *Presiding*

APPEARANCES:

BERNARD D. LEVINSON, Representing Food and Drug Administration;

E. N. STEELE, Attorney for Pacific Coast Oyster Growers' Association, including growers and packers of Olympia oysters;

J. L. WIEGARDT, appearing for Wiegardt Brothers, Ocean Park, Washington;

O. L. AMOS, appearing for Rockpoint Oyster Company, Blanchard, Washington  
 GEORGE D. ESVELDT, appearing for E. H. Bendiksen Company, South Bend, Washington;  
 W. ARNOLD WARING, President, Pacific Coast Oyster Growers Association, appearing for Haines Oyster Company, Pier 67, Seattle, Washington;  
 VANCE TARTAR (of State Oyster Laboratory), Gig Harbor, Washington, appearing on behalf of the Washington State Department of Fisheries, 1308 Smith Tower, Seattle, Washington;  
 C. L. ANDERSON, appearing on behalf of the Washington State Department of Fisheries, 1308 Smith Tower, Seattle, Washington;  
 CHAS. B. DAVIS, appearing for Coos Bay Farmers' Cooperative, 216 Masonic Building, North Bend, Oregon, and Salem, Oregon;  
 CHAS. R. POLLOCK, *appearing* for Pacific Coast Oyster Growers' Association, Seattle, Washington;  
 C. C. RICE, appearing for Belfair Oyster Company, Belfair, Washington;  
 TREVOR KINCAID, appearing in behalf of Pacific Oyster Growers' Association, 1904 East 52nd St., Seattle, Washington;  
 H. N. SENTZ, appearing for North Star, Inc., 1001 Westlake Ave. No., Seattle, Washington;  
 F. W. MATHIAS, appearing for Pacific Coast Oyster Growers' Association, 3135 So. Lorne, Olympia, Washington;  
 A. SOLOMON, appearing for Plancich Fish Company, Portland, Oregon;  
 ERNEST WERNER, appearing for Coos Bay Farmers' Cooperative, Silverton, Oregon;  
 IVAN HOLMS, Pacific Oyster Co., Naselle, Washington;  
 A. LILLIE, Willapoint Oyster Co., Seattle, Washington.

Mr. Anderson and Mr. Pollock had done a good job and had reduced the results of their work to a written statement for the record. Our witnesses were all men of experience and their testimony was consistent. At the end of four days of testimony, 422 typed pages, we felt that we had established the following facts:

1. That a different standard of identity should be used for Pacific oysters than Eastern oysters or Olympia oysters, due to the difference in size, biology and appearance of the Pacific oyster.
2. That to enable the housewife to know the kind of an oyster she was buying, each container should be clearly marked "Pacific Oysters".
3. That each container should also show the grade or size of the oysters contained therein.
4. That due to the great difference in the size of Pacific oysters marketed, the housewife should know the approximate number of oysters in the container, which would require six grades:

5 to 8 per pint	12 to 15 per pint
8 to 10 per pint	15 to 18 per pint
10 to 12 per pint	18 or more per pint

5. That due to the dark pigment peculiar to oysters grown in Pacific Ocean waters it was necessary at times to wash or "blow" them longer than proposed for the Eastern oyster. This pigment is mostly embodied in the mantle of the oyster. It is only objectionable when in washing it clings to the body or white meat of the oyster, making it less acceptable to the public. Additional washing removes it.

6. The proposed rules were accepted that oysters in the shell should not be subjected to "floating" in fresh water, but should be washed and made clean before they are placed on the table for opening.

At the close of the hearing, but not for the record, the presiding officer, Edward E. Turkel, highly complimented the oystermen on the orderly and thorough manner in which our case was presented.

The hearing was adjourned to reconvene on January 15, 1946, in Washington, D. C. We were invited to attend but instead submitted our brief. We were represented by the National Fisheries Institute, in which the Pacific Coast Oysters Growers' Association had a membership.

In due time the hearing was completed, the manual was adopted and printed. As it applied to the Pacific oysters our position and requests were granted. At last standards had been adopted by the Food and Drug Administration, which applied to interstate commerce and was later adopted by our State Health Department, which required that all packers use the same grading and standards of identity.

This hearing, where officials from Washington, D. C., came to Seattle instead of their customary practice of requiring us to go there, brought national recognition to the Pacific oyster industry. The January, 1946, issue of the Pacific Fisherman, a monthly magazine, published a full page account of the hearing, together with a group picture of the attending oystermen. The Fishing Gazette of New York, and other Fisheries publications, as well as newspaper reports, made appropriate comment.



## **CHAPTER IX POST WAR SEED FROM JAPAN**

From what I have already written, it will be observed that a regular dependable supply of seed is of great importance to the oyster industry. Up to the outbreak of war we not only had received an abundant supply at a low cost, but the Japanese had been good salesmen and at times sufficient seed had been planted to produce surpluses far beyond the markets we had developed. After years of effort we had succeeded in securing partial control through the appointment of the Pacific Coast Oyster Growers Association as agent through which seed was purchased for its members. By that means said association had been able to finance its activities. Matt Mathias, who had originally proposed the program and followed through on it until the war, was a member of the seed committee. Realizing the importance of re-establishing that relationship after the war, the smoke and devastation of the atom bomb had hardly cleared away until he started to work on it again. He found re-establishing business relations and commerce between two nations after a bitter and bloody war was not easy.

In the latter part of 1945 Matt and the seed committee found that purchases from Japan would have to be made through some Department of the United States Government. They found out from Charles Jackson, general manager, National Fisheries Institute, that Colonel Fiedler was in Japan studying the problems of the oyster industry. As time went on they learned that the seed growers of Miyagi prefecture were anxious to resume sale of seed to us and thought they could furnish 10,000 cases in 1946.

Much discussion was had over the months to figure out a method of apportionment of the seed among the oyster growers. During the war years, 1942 to 1946, we had received some natural set of seed as will be shown in a later chapter, but not sufficient to replenish the heavy demands caused by the war. All oyster growers needed seed. But as time went on, it became apparent that the red tape could not be unravelled in time for shipments in the spring of 1946.

At a meeting of the Pacific Coast Oyster Growers Association held on March 27, 1946, a letter written by Colonel Fiedler to Mr. Charles Jackson of the National Fisheries Institute, was with consent of the writer, read to the oyster growers. It stated that since October, 1945, they had made a detailed study of the problems of the industry, its possible production, methods of shipment, and other factors. That they had visited the Sendai oyster producing area and conferred with 45 to 50 seed-oyster producers, and Miyagi prefectural authorities, representatives of the Japanese Bureau of Fisheries. They found all collecting racks rotted with age and beyond repair and that spat collecting equipment would have to be rebuilt in its entirety. That shore facilities were in good state of repair. That they believed construction of the racks, stringing of spat collectors (oyster shells) and other preliminary work could be started by April 1, 1946. Further, that they talked in terms of producing 50,000 cases of seed during the winter of 1946-1947. He (Colonel Fiedler) then laid down some rules, that if the Pacific Coast Oyster Growers Association were to handle the seed as agents they would have to sell not only to their members but to any oyster grower who wished to buy; he requested an estimate of the maximum requirements for 1946-1947 shipments, and for the following three or four years. Also he assumed that everything was being done to require maximum seed-oyster production in the face of many obstacles that have faced a war torn and defeated nation.

In 1946 the seed committee had been enlarged. Its membership was as follows: F. W. (Matt) Mathias, general chairman; Puget Sound members, Roy E. Wilson, O. L. Amos, Lawrence Gosser, Jack Caston and F. W. Mathias; Willapa Harbor district, Stanley Gillies, T. H. Pederson, E. L. Sherwood, Ivan Holm, George Esveldt, J. H. Doupe and J. L. Wiegardt.

The working out of the problems connected with the purchase and delivery of seed was the most important matter under consideration for the next year or two. At the annual meeting of the Pacific Coast Oyster Growers Association

in August, 1946, good judgment was shown in the selection of Matt Mathias as President, J. L. Wiegardt as Vice-President, and Charles R. Pollock as Secretary-Treasurer.

On April 27, 1946, a conference was held in Chicago with representatives of the U. S. Department of Commerce; Arnold Waring, E. N. Steele, and Charles R. Pollock represented the Pacific Coast Oyster Growers Association. It seems that several government agencies had been in some way connected with the production of seed oysters in Japan. It was finally worked out that the U. S. Commercial Company, an R.F.C. Corporation known as U.S.C. Co., would handle all matters pertaining to Japanese exportation and the importation and distribution of seed oysters here. That it would have the sole responsibility.

Following this the seed committee was required to give a complete historical report on the Pacific oyster industry, including detailed information in regard to securing oyster spat and harvesting, packing and shipping the same, including care in transit. This was followed by a letter outlining eleven items upon which a contract for the agency for the Pacific Coast Oyster Growers Association would be based.

There was much detail connected with this. The Japanese desired to change their shipping dates and ship during the fall and winter months rather than in the spring. This was rejected for many reasons. The winter months are our time of harvest. The beds from which the oysters are harvested can not be replanted until the harvesting is completed. The seed must be hardened in Japan one winter before they are in condition for the long journey to this country. Other reasons were given. The Japanese yielded on this point. They, no doubt, knew these things but were anxious to get the money for their seed and the Japanese Government wanted to build up its export-import balance. Finally the seed contract forms were approved, signed by the growers, advance payments made, including 25 cents per case to cover the expenses of the Pacific Coast Oyster Growers Association, and in the spring of 1947 a total of 56,704 cases of seed were received and planted on the American Coast as follows:

10,142 cases in Puget Sound, Washington  
22,933 cases in Willapa Harbor, Washington  
5,230 cases in Grays Harbor, Washington  
15,357 cases on the Oregon Coast  
750 cases on the California Coast  
2,292 cases in British Columbia and Alaska

In the meantime, exercising the authority vested in them, the State Fisheries Department had promulgated rules and regulations to prevent the spreading of drills or other pests. In the State of Washington before oysters were moved from one area to another the grower was required to secure from the Department a permit. He was required to make an application, fill out a form showing from where to where the oysters were to be moved. The Department inspected the beds, and if there was no danger of infesting oyster beds not already infested, the permit was granted. This also applied to seed oysters from Japan. No seed could be imported unless it had first been inspected by the Department and found to be free from drills or other pests. Rather than hold the seed at the port of entry, open each case and inspect it, thus preventing the seed from being promptly planted, through cooperation between the State Fisheries Department and the Pacific Coast Oyster Growers Association, a man was sent to Japan to inspect the seed as it was being packed. A fee per case was charged by the Department. The travel and per them expense was paid by the Pacific Coast Oyster Growers Association. All this was approved by the oyster growers. The drill had originally been brought in from Japan, unintentionally and without knowledge of its destructive habits. Some areas had already suffered losses and the industry was desirous of preventing it from reaching uninfested areas.

Dr. Trevor Kincaid was requested to act Milo Moore for the 1947 seed but for personal reasons regretfully declined. ilo ore, Director of the Department of Fisheries, then appointed that very able biologist, John Glude, who was then heading up the Shellfish Division. He did a remarkable job. This was the beginning of a practice which has been

followed ever since, and has now become routine, and will later be mentioned many times. John was also very helpful in the detail of loading, observing the methods and practices used by the Japanese in handling and packing the seed and directing the place where the seed was loaded *above deck*, its being properly covered with matting, and that the "Captain" of the ship was instructed to keep it wet with sea water during the voyage.

## **CHAPTER X**

### **THE PACIFIC OYSTER INDUSTRY ENTERS THE ERA OF BIG BUSINESS**

We have now arrived at the division point between the Pacific oyster in its experimental stage, afflicted by its many problems of pioneering, accompanied by historical events which intensified our problems, and a new era where the Pacific oyster industry should be classified as big business.

A brief resume of the period from which we had emerged will clarify my meaning.

First, the first eight years when the Japanese had but one customer for their seed

Second, the period of resistance from a marketing standpoint to this new species, the *Ostrea Gigas*. It was a time when anything from Japan was very unpopular. The oyster was different in size, shape and flavor than either the Olympia oyster (*Ostrea Lurida*) or the Eastern oyster (*Ostrea Virginica*).

Third, we had gone through a period of promotion and excessive planting of seed producing oysters far in excess of available or developed markets. The industry "outgrew its pants" so to speak.

Fourth, we had gone through the greatest depression ever experienced in this country, and the days of N.R.A.

Lastly, we had gone through World War II, one of our enemies being the only country from which -we could buy seed and replenish our beds. *Five years* is a long time for an oyster bed to go without seed, except the comparatively small amount of set in this country.

Yet we had survived. The Pacific Coast Oyster Growers Association was still alive. After the war ended it had been stimulated and reorganized. During the years some who had expected to make a lot of money in the business had become discouraged and quit. Others, known as "free riders" had floated along, hoping someone would do something to pull them out, but were not willing to contribute either in effort or financial support. But there were those who loved the oyster business and were willing to and did attend meetings, contribute their best effort, this best judgment growing out of experience, and their financial support. Their names appear in these pages most frequently, and especially among the officers, trustees and men serving on committees.

To these men, and especially those who served during the war and post war days immediately prior to the first post war shipment of seed, that I desire to pay tribute before entering into the history of the industry following that time. For that was the master stroke. They used their brains and spared no effort. They profited by past experience; and in so doing the Pacific Coast Oyster Growers Association secured the agency for selling and distributing the seed from Japan.

Only those who are in the oyster business can fully realize the importance, the necessity, of securing a dependable supply of good seed, at a reasonable price, the quality and cost the same to each grower. This had been learned the hard way, through experience when the agency was in the hands of the Japanese, who were also oyster growers. At one time there were three agencies, one in Japan, one in Seattle, and the sub-agencies selling to the grower with whom he was a competitor. Each one received his commission. The agencies received more than the growers of the seed. This was eliminated by the Pacific Coast Oyster Growers Association agency and was reduced to each grower paying to the Association 25 cents per case to cover the actual cost of service. In turn it largely paid the operating expenses of the Association, the collection of which had been one of the most difficult and troublesome problems.

Matt Mathias, who had originated the idea of securing the seed through the Pacific Coast Oyster Growers Association knew that after the war the agency would be sought by many brokers. It was a valuable account. He was chairman of the seed committee. General McArthur had hardly been placed in authority in Japan until Matt wrote him a letter resulting in getting in touch with Colonel Fiedler, and later the proper agencies in Washington, D. C.

It took three years of hard work to secure the results. I felt at that time, and still do, that this was the most important problem that had been considered by the Pacific Coast Oyster Growers Association, and its favorable outcome has meant much to the Pacific oyster industry. Further, that it was handled with diligence, diplomacy, skill and thoroughness. In my experience I have never know a problem so nicely handled.

To refresh my own memory I have read the minutes of all the meetings that were held in connection with it, by the entire association, the trustees, and the seed committee. I have read the extensive correspondence connected with it. Things were in a confused condition, both in Japan and in Washington, D. C. There was much red tape. Those in charge admittedly knew nothing of the seed business in Japan or the growing, harvesting or marketing of oysters in this country. Many questions came up which had to be answered before the Department in charge could establish its policy. Each new question that came up was studied, a seed committee called, who sometimes settled our position by motion. If they felt it should be referred to the trustees they did so. If the trustees felt it was of sufficient importance they referred it to a special call of the entire association.

Here was the place where the force of the decision might have been lost. Fortunately we had Charles R. Pollock, our Secretary-Treasurer to take over. Charley faithfully attended all meetings. He took careful notes of all points of discussion and the final decision reached. When he had finished his letter to the Department it was a masterpiece. It was clear, informative, firm yet diplomatic, explaining our position exactly. Slowly but surely the U. S. Department understood the entire situation, were convinced and granted the agency.

In my opinion the Pacific Coast Oyster Growers Association stands deeply indebted to Charles Pollock for these and many other services which he performed with but meager compensation.

I personally desire to congratulate and compliment each of those who took part in those proceedings. The following history could not have been written without it.

Now let us return to the historical progress of the Pacific oyster industry. The channels through which our seed supply having been so carefully worked out through which we had received and delivered the first satisfactory shipment of seed in the spring of 1947, the seed growers in Japan having re-organized and put their equipment in usable condition, and here the Pacific Coast Oyster Growers Association having reorganized and now stood ready to handle and deliver the seed, the following years were comparatively easy.

At the annual meeting of the Association in August, 1948, Roy E. Wilson was elected as President, John L. Wiegardt as Vice-President, C. R. Pollock as Secretary-Treasurer. On the Board of Trustees were Arnold Waring, E. H. Bendikson, R. N. Steele, Matt Mathias, Stanley Gillies, Ivan Holmes, Fred Gries, Glenn DeHaven, Charles Davis, Dr. C. R. Elsey, and E. N. Steele. Fifty-two members attended the meetings. There were then 88 members, which was increased to over 100 in 1949. The Tokyo Food Products Co., Ltd., had been selected by the Japanese seed growers as their agent in Japan. The State Fisheries Department sent Cedric Lindsay to Japan as inspector of seed and the Pacific Coast Oyster Growers Association sent their President, Roy E. Wilson, to check the quality of seed shipped in the spring of 1948. Thirty-two thousand, eight hundred and thirty-nine cases were shipped, received and delivered, for which we paid \$208,209.72.

In 1948 the Pacific Coast Oyster Growers Association, feeling the need for a more binding organization, incorporated as a non-profit incorporation under the laws of the State of Washington. The same officials as above named became the officials of the corporation. The same name was adopted.

During the year 1948 a matter came up that required much attention. The State Fisheries proposed to build a laboratory in the Willapa Bay area, and to pay for it by passing a law levying a tax of 4 % on all oyster production. This tax was opposed for the following, among other reasons. We operate as farmers, own our lands, and pay a land tax. We buy our seed, cultivate our crops, fight the pests, and pay all other taxes a farmer does in addition to licenses. As a substitute measure we proposed a law to place oysters under an Oyster Commission. Both proposals were dropped, but the Legislature in the 1948-1949 session passed a law providing for a tax on canned oysters (Chapter 107, Laws of 1948-1949).

It is worthy of note for reference in connection with a later chapter on pollution, that in the meeting between the State officials and the oyster growers, held on July 8, 1949, one bushel of oysters in the shell, for taxation purposes in the administration

of the law, should be considered the equivalent of one gallon of oyster meats. In other words, that at that time throughout the industry, as an average, one bushel of shell oysters, when opened, would produce one gallon of oyster meats. In the spring of 1949, 45,873 cases of seed were imported.

The annual meeting was held in the Olympian Hotel, Olympia, Washington, on August 26, 1949. The same trustees were elected, who chose John L. Wiegardt, President, Matt Mathias, Vice-President, and C. R. Pollock, Secretary-Treasurer. It was a very enthusiastic convention, with 81 at the banquet.

During that year there were no problems of great importance. The President, John L. Wiegardt, was sent to Japan in the spring of 1949. His report showed an improvement in understanding between us and the Japanese seed growers. He made several suggestions which proved of value in later years. Biologist David C. McMillan represented the State Fisheries Department as seed inspector. In the spring of 1950, 45,706 cases of seed were shipped and delivered. The prices paid for seed will be set out in another chapter. There were 199 separate orders.

Five other matters came up of sufficient importance to mention. First, the United States Supreme Court refused to hear the appeal from the decision of the U. S. District Court, which affirmed the ruling of the U. S. Department of Health on the fill of cans by oyster canners. This ruling required an increase in drained weight of all canned oysters. This decision meant a heavy loss to canners, a decline in the use of oysters for that purpose and a corresponding additional quantity of oysters thrown into the fresh oyster markets.

Second, the Health Department added a new requirement. All containers of fresh oysters must show the date when the oysters were packed.

Third, the Association carried on a survey of the oysters on the beds ready for market in 1950. This report was finished and presented at a meeting on September 23, 1949. The following results will be of interest:

Estimate from Willapa Bay area -----	418,000 gallons
Grays Harbor area -----	89,500 gallons
Puget Sound, Samish Bay area -----	161,500 gallons
Puget Sound, Southern area	
including Hoods Canal -----	<u>209,000 gallons</u>
	878,000 gallons

In addition it was estimated that there was on the Oregon Coast over 200,000 gallons, on British Columbia, Alaska and California shores about 500,000 gallons, making a total of approximately 1,500,000 gallons of oysters.

Fourth, in addition to the pollution condition, caused by sulphite liquor from the pulp mill in Shelton, in the South Puget Sound area a serious condition was developing in the North Puget Sound area, especially Samish Bay and Padilla Bay. Matt Mathias was chairman of the Pollution Committee. At a meeting held in June, 1950, a resolution was passed asking relief. This was sent to the State Pollution Commission and the Governor. Mr. Eldridge, Director and Chief Engineer of the Commission, answered and promised further studies. This will be further covered in a later chapter on pollution.

Fifth, the advertising committee was provided with funds. Reinhardt Knudson, an advertising agency, was employed. Various kinds of advertising were used. Thousands of recipe folders were printed and distributed. Sunset Magazine carried our story in picture, in verse, and with recipes.

At the annual meeting of the Pacific Coast Oyster Growers Association held in August, 1950, Dr. C. R. Elsey was elected President, W. Arnold Waring, Vice-President, and C. R. Pollock, Secretary-Treasurer. In the winter of 1950-1951 there were violent storms in Japan and there threatened to be a shortage of seed for the 1951 orders. Roy Wilson was chairman of the seed committee. The State Legislature in February, 1951, had passed a new law covering the inspection of seed in Japan. It authorized the same method as had been practiced for several years. Clyde S. Sayce, an able biologist, and our president, Dr. C. R. Elsey, were in Japan during the seed packing and shipping time. Fifty-one thousand nine hundred cases of seed were shipped and delivered. On account of the storms above mentioned the seed was of poorer quality than in previous years. Our bill was \$358,972.06.

The large orders for seed produced new problems for the seed growers. As will be shown in the statistics shown in a later chapter, the orders for broken seed were increased. The breaking of the large shells into smaller pieces took much time. It was all done by hand. The broken seed especially had to be washed so that the inspector might be able to see the very small seed. Yet it must not be washed too much, for some sediment protected the seed and there was less mortality after shipment. These and other problems were continually being studied by the inspectors, reported to the Association, and gradually solved.

There continued to be a battle over freight rates. Before the war freight rates on Japanese boats were low. After the war they joined the "Trans Pacific Ocean Freight Conference of Tokyo and Yokohama". The rates increased from \$6.00 per ton to over \$23.00 per ton, nearly 400%, and still threatened to go higher.

To serve for the following year, September 1, 1951, to August 31, 1952, Dr. Elsey was elected to a second term as President, W. Arnold Waring as Vice-President, and C. R. Pollock as Secretary-Treasurer.

The Pacific Coast Oyster Growers Association followed the custom that had been practiced for several years by sending our President, Dr. C. R. Elsey, to represent us in Japan, and the State Fisheries Department sent their very able biologist, Charles E. Woelke.

In addition to the fact that as President our representative gained in prestige and respect by virtue of his office, Dr. Elsey is an eminent biologist. For years he headed up, as Director, the Department of Fisheries of British Columbia, Canada.

In the spring of 1952 the heaviest shipments of seed up to that time were made. Through the Pacific Coast Oyster Growers Association 58,729 cases of seed were imported at a cost of \$385,147.25. In addition, other growers (non-members of P.C.O.G.A.) brought in 24,500 cases, making a total of 83,229 cases. After the United States Government released control of Japanese exports some of the larger growers entered the field of individual purchasers of seed and sent their own purchaser and inspector to Japan.

However the Association membership was increasing. As chairman of the membership committee Ivan Holm reported twenty-one new members making a total of voting memberships 149. The Treasurer's report showed our finances in good shape. The returns from the small charge made for the handling of seed was sufficient to meet our needs, so the assessment of members on a gallonage production basis was discontinued. There was a refund of six cents per case to the purchasers of seed.

We renewed our membership in the Oyster Institute of North America, and also in The National Fisheries Institute, thus keeping in close touch with problems of an inter-state nature, and qualified representation in Congressional or Federal Department matters of interest to the oyster industry.

It was about this time that our members began to be concerned and disturbed about imports from Japan of canned, frozen, and smoked oysters. This subject will be covered later.

Advertising continued. The heavy production of oysters from the large plantings of seed would require a rapid expansion of markets. An appropriation for this purpose was made. Richard Whiting of the Standard National Advertising Agency was employed to conduct the advertising program and as Public Relations man for the industry.

To keep abreast of problems connected with Public Health, we cooperated with the Washington Health Department Seminar which, in conjunction with the Health Departments of Oregon, California and British Columbia, held a convention on August 23rd and 24th in Seattle, Washington. Soon after this convention W. P. Henderson, Shellfish Sanitation Inspector for the Washington Public Health Department, resigned and retired. "Bill", as he was called by his many friends, had occupied that position for many years. At a meeting of the Pacific Coast Oyster Growers Association his many good qualities were extolled, and the Secretary instructed to write him a letter of appreciation for the efficient, yet friendly manner in which he had served, and extended our sincere good wishes for his future.

Malcolm Edwards, a Pacific oyster grower residing in South Bend, Washington, had been a Trustee of Pacific Coast Oyster Growers Association for some years. His activities in the Association had gradually increased. His ability to analyze problems as they arose, as well as his administrative ability, had been observed by the membership. At the annual meeting in August,

1952, he was elected President, and R. H. Bailey of Seattle, Washington, Vice-President. C. R. Pollock was re-elected as Secretary-Treasurer. Malcolm was, at the time of his election, attending the convention of the Oyster Institute of North America being held in Atlantic City. He was notified of his election by wire. There was a feeling of confidence that under his administration even greater success awaited the industry.

In contacts our Public Relations man, Mr. Whiting, had made while calling on those markets which sold oysters, he had found that there was much dissatisfaction with the standards of identity used in packing Pacific oysters. These standards were adopted after the hearing in Seattle, Washington, in November, 1945, as I have previously set out. The adopted requirements required that six grades or sizes of oysters be used, and that each container be marked designating the grade by the number of oysters in the container rather than the size of the oysters. Up to that time oyster packers believed, as they had testified, that the standards as adopted would more clearly advise the housewife than any other. It now came to our attention in a very positive way that we had been wrong. In the first place there were six grades. It was not practical for the market to keep a display of so many grades in his show cases, and usually only used from two to four different sizes. Second, the housewife could not tell how large the oysters were by the number indicated on the container. Much time of the clerk was required to advise her as to which were large, medium, or small.

This matter became of such importance that under the supervision of the Pacific Coast Oyster Growers Association, a petition was prepared applying for a hearing under the U. S. Food and Cosmetic Act, before the U. S. Department of Health, Education and Welfare. The petition set out the facts, as I have related them, which was signed by the officials of the Association, and also by 79 oyster packers and proprietors of oyster markets.

To make a long story short the petition was granted, the date set for the hearing, and I was selected on August 29, 1953, to prepare and present our case before the Department in Washington, D. C., as legal counsel. Malcolm Edwards was sent with me as principal witness. Malcolm was very well qualified to testify on all questions raised. We introduced many affidavits by men operating oyster markets in the larger cities, such as Seattle, Portland and San Francisco. Malcolm testified as to the qualification of each to testify. Dave Wallace, executive manager of the Oyster Institute of North America, was also a witness and was very helpful during the hearing. We were soon notified that our application had been granted, and on January 1, 1954, we received a copy of the amendment that had been made to the standards of identity for Pacific oysters. From then on the requirements have been that each container shall be marked, Large, Medium, Small, or Extra Small. The container must be filled with oysters ranging in numbers as set out in their standards, but the number does not appear on the container except at the will of the packer. The standards as then adopted have proved satisfactory and are still in use.

In the spring of 1953 President Edwards represented the Association as inspector of seed in Japan, and Charles Woelke was sent by our State Department of Fisheries. 46,474 cases of seed were ordered, but one ship had to ride out a storm and we experienced our first major shipping loss of 463 cases of seed, valued at \$3,364.00. 46,011 cases were delivered to our members, 23,636 by other than Association members, making a total plant of 69,647 cases.

A later chapter will be written giving statistical tables on seed shipments. I have been setting out the year to year shipments for the benefit of the reader that it may be seen how rapidly the seed shipments had increased since the war. As I have stated, it requires about three years to produce marketable oyster crops. From this it will be understood that at least three years shipment of seed accumulates before any are harvested. In the meantime, the quantity of oysters marketed being small there is a market shortage which brings a good price. Little effort is used to enlarge the markets. But when the crop matures from a heavy planting of seed the market soon learns about the surplus and the brokers and wholesalers in the large cities, the principal markets, begin to use the many sharp practices known so well by them, to bring about cut prices and even price wars. I shall not enumerate them here. Even the Government in the Code, or N.R.A. days failed to entirely prevent it. Both before and since those times the practices, which I have set out in a chapter on the N.R.A. Code, have been used and found successful in proportion to the weakness of the market and the size of the surplus crop.

This condition was beginning to be felt in 1952. The oyster industry had previously gone through these conditions at least twice before. Each time it had been brought to its knees. So on December 23, 1952, the Pacific Coast Oyster Growers Association, after careful consideration of the danger confronting the oyster industry, appointed a committee known as the marketing committee, consisting of four members, Earl Brenner, Ted Holway, W. Arnold Waring and R. N. Steele, who was elected as chairman. A formal report was submitted to the Trustees on January 17, 1953. The President, Malcolm Edwards, thought it of sufficient importance to submit by Bulletin No. 55 to the members and in fact to all growers. This was done on



April 28, 1953. The following is a copy of Bulletin No. 55:

**BULLETIN NO. 55**

April 28, 1953

TO: MEMBERS OF THE PACIFIC COAST OYSTER GROWERS ASSOCIATION AND ALL OYSTER SEED BUYERS:

The following report of the marketing committee of the Pacific Coast Oyster Growers Association is a product of many hours work on the part of the committee since it was formed December 13, 1952. The formal report was submitted to the Trustees, January 17th, with statistical revisions made since then.

It is the feeling of the trustees that the summary of conditions and recommendations of the committee are of immediate importance to the industry. Your Secretary has been instructed to forward a copy to each member of the Association and to each buyer of seed. We are of the opinion such a program, if it is to be effective, should be developed well in advance of the critical stage. It is our hope all members will give this report their earnest attention.

It is my sincere belief the challenge of increased volume can be met if the industry will make a direct and coordinated effort to merchandise their product.

It is a certainty increased selling and promotion is the answer to profit and security for the industry. This vital question and how the Pacific Coast Oyster Growers Association fits into the picture requires the good thinking of everyone. Would you please read this report and forward your opinion and your own thoughts about a satisfactory solution to the Secretary so that they can be immediately reviewed by the committee for further action?

PACIFIC COAST OYSTER GROWERS ASSOCIATION

Very truly yours,

Malcolm B. Edwards, President

**REPORT OF MARKETING COMMITTEE**

Our committee had three meetings, solicited information from many individuals engaged in the industry, gathered data from publications and association files and we herein submit some of the most pertinent findings for your consideration.

The State of Washington Department of Health advised us that there are 60 plants located in the State of Washington which have the facilities to open fresh oysters. We estimate that there are eight such plants in the State of Oregon. Mr. Pollock advised us that there are approximately 165 purchasers of Japanese oyster seed for 1953 delivery.

We are presently facing an increased production of shell stock which might prove disastrous to the entire industry. The plantings year by year since the war are listed and we have extended these into gallons estimating 25 gallons per case of seed. We have also shown the estimated marketing season for the oysters when they mature.

Year Planted	Cases of Seed	Gallons @25 gal/case	Year Marketed
1947	56,000	1,400,000	
1948	33,000	825,000	
1949	46,000	940,000	
1950	46,000	940,000	1952-3
1951	52,000	1,200,000	1953-4
1952	83,000	2,100,000	1954-5
1953	70,000 (est.)	1,750,000	1955-6

## CHAPTER XI

We show herein the number of cases of oysters canned over the past 10 years as reported by the Pacific Fisherman Magazine. We have used a conversion figure of 4 gallons per case to show the approximate number of gallons used to make up the canned oyster pack during these years. We were advised by several canners that the 1953 pack would not exceed the 1952 pack and therefore have used an estimated figure of 100,000 cases.

<u>Year</u>	<u>Cases of Cans</u>	
	<u>Basis 48/E.O. Cans</u>	<u>Gallons</u>
1944	None	12,000
1945	3,184	12,000
1946	89,050	360,000
1947	57,205	230,000
1948	83,489	255,000
1949	113,989	455,000
1950	120,742	483,000
1951	132,140	530,000
1952	109,076	436,000
1953	100,000 (est)	400,000

Over and above the estimates of production from the Japanese planted seed we must consider the natural reproduction that happens in the Willapa Harbor and Hood Canal areas. We have no accurate information to afford you on the production from natural spatting, however, we realize that it is a factor that must be taken into consideration. Several companies reported that their bed stocks were principally from domestic sets. Willapa had a fair set in 1-950 that will be matured by next fall. There was a very light setting in Hood Canal in 1952 with Dabob Bay experiencing a favorable commercial set averaging 15 spat per shell. Oysters available from State Reserves will also increase the production.

A surprise to many is the rapid increase of Pacific Oyster production in the Puget Sound since the close of World War II. This increase is due to new plantings in the lower Sound, on ground that was formerly used in the cultivation of Olympia oysters. This increase will be even greater during the next two years by virtue of increased plantings in these areas.

<u>Year</u>	<u>Gallons Shucked in Puget Sound</u>
1949-50	255,543 gallons
1950-51	433,745 gallons
1951-52	424,126 gallons

The foregoing information would indicate that the industry has a choice of either selling more oysters, which would require an intensified sales and promotion program, or planting less seed to reduce the production considerably. Assuming that the industry is in trouble at the present time, the problem of disposing of a production which would be over twice as great as this year's production starting 18 months from now presents a very grave problem to every individual in the industry.

Realizing that most oyster producers prefer to stay in business, utilize their Productive land and assets, as well as realize a profit for their efforts, we have investigated and considered means by which an increased production could be profitably marketed.

It is our opinion that not only a publicity and promotion campaign is vitally necessary, but also that experienced

and qualified marketing personnel must be employed to efficiently and systematically handle the sale of the product. Some of the largest operators possibly have the personnel and ability to handle their own marketing; however, the bulk of the industry does not have any such qualified personnel, let alone a businesslike marketing program.

Due to the great number of operators and the small volume of each, it would indeed be too costly for each to engage their own personnel and handle a marketing program. It, therefore, appears that through a cooperative effort a marketing business could be formed that would handle the production from many operations at a nominal cost. We observed and secured information concerning two types of marketing organizations:

1. Cooperative organization patterned after some of the Farmer's Cooperative Groups that are presently operating.
2. A corporate form that would be owned and controlled by the individual members thereof.

The merits of the cooperative versus the corporation could be discussed and investigated to great lengths. From what information was made available to us, we feel that the corporation would be better as it does have a broader field in which it can work besides not requiring as much attention and legal work as a cooperative organization.

A corporation could be formed with a low capitalization which would enable the small operator to purchase a voting share in the operation of the business for a nominal sum. The share holders would elect a board of trustees to handle the general operations who would in turn hire a general manager to conduct the affairs of the corporation.

The corporation would contract with the individual shareholders to market their production of oysters or a substantial part thereof. In the event that any shareholder wanted to market a portion of his oysters through his own facilities this might be permitted providing the agreement specified that the oysters marketed at terms and conditions not less than the terms and conditions under which the corporation was selling for the benefit of its shareholders.

We feel that there should be a minimum of 500,000 gallons of fresh oysters to form such a marketing organization. We feel that a minimum of 10c per gallon should be allocated by the organization for a promotion of a brand to be selected by the company.

A marketing organization would stabilize market conditions by reason of its volume and cooperative effort. This large promotion program could be carried on to establish new markets and promote new products.

Quantity lots of packing materials and equipment could be contracted for, with the saving going to its members.

We hope that the foregoing may have been sufficiently thought-provoking to stimulate the formation of a marketing organization. We suggest that this report be mimeographed and sent to members of the industry for their perusal.

The Pacific Coast Oyster Growers Association is not and should not be the marketing concern. The opportunity to become a shareholder in such an organization should be made available to any and all that are legitimate and honorable members of the industry.

Respectively submitted to this called meeting of the Board of Trustees of the Pacific Coast Oyster Growers

Association this 7th day of March, 1953, at Seattle, Washington.

R. N. Steele-Chairman

Members of Committee:

Earl Brenner  
Ted Holway  
W. Arnold Waring

This report was received with general approval. As I have previously set out, a cooperative selling agency had been carefully considered before. I had at the request of the membership, drawn up proposed Constitution and By-Laws for such an organization. Each time the plan had been adopted in principal by the organization and the adoption of a resolution to that effect signed by the growers. Each time something happened to prevent its final adoption. One I recall was the financial crisis of the 1930's and the N.R.A.; another was the World War 11. Each time it had come up there were some problems or objections discussed but it is well known that the general plan had been approved by a large percentage of the oyster growers. In addition to that, Congress had passed a law approving cooperative selling corporations, and making it legal for such a corporation to sell its members products all at one price, thus avoiding the unfair competition and price wars as being in the public interest. The report of this committee meeting with favor, the problem of securing a dependable supply of seed having been realized, it was now thought to be the time to put the marketing to the front in order to make a profit to those in the industry. So a meeting was announced and a group of about fifty growers attended, of which I was one.

We had learned from the past experience, as set out above, and by other marketing experiences that the following things must be done if it was to meet general approval.

1. It must have a name or brand that was not being used by any other company.
2. From a legal standpoint it must be prepared by an attorney qualified in this type of practice whose ability, honesty and experience would give his opinion and draftsmanship confidence.
3. It must have an executive head who was not otherwise connected with the oyster business, but who was well qualified as an oyster salesman and as an executive.
4. The central office and processing plant must be in a city from which large shipments of oysters could be shipped by rail or truck and where supplies such as containers, boxes, etc., could be readily delivered to the plant, and where a good market for oysters could be easily supplied.
5. A qualified accountant.

These things were discussed and there was much enthusiasm. Later there were other meetings. The above problems were met as follows:

1. The Haines Oyster Company was one of the oldest established wholesalers of oysters in the state. It was not presently selling oysters, and arrangements could be made to purchase the trade name.
2. We could engage the services of the law firm of Macbride, Matthews and Haney, of which Thomas H. Macbride was a member. They were recognized as specialists and experts in cooperative law. They had organized many of the cooperatives in the state, such as the apple growers of Eastern Washington, similar in purpose to our own, and some of the largest in the state, such as Marigold and the Egg

Cooperative. Tom Macbride had been engaged in that practice during his entire time since being admitted to the bar, and his father before him, who was still a member of the firm.

3. W. Arnold Waring had worked for the Haines Oyster Company for many years, and finally had become owner of it in his own right. As most oystermen know he had taken a prominent part in the Pacific oyster business for many years as a wholesaler, growers and packer. He was one of the best informed credit men on the coast. His long dealing with the oyster distributors had given him knowledge of their financial standing. Presently he was operating an opening and packing plant on Willapa Bay, which he was willing to dispose of. Arrangements could be made with him to serve as executive head of the co-op corporation.

4. The city of Seattle seemed to have all the desired advantages for the central office and processing plant. The building which had been used by the Haines Oyster Company, Pier 47, Seattle, Washington, could be had at a reasonable rental and by some remodeling be made suitable and adequate for the oyster growers Co-operators use. Seattle is also a good oyster market.

5. Mr. Macbride informed us that co-operatives required the services of an accountant who made a specialty of that kind of accounting work. It required the use of methods which would be more simple and less expensive than used in general merchandising. He offered to recommend a firm who served many co-operatives.

The first meeting referred to above was held in Seattle about July 15, 1953. It was agreed that negotiations should be entered into to bring about the securing of the building and other objectives, and the costs connected therewith, and authorized the employment of the attorneys. On July 24, 1953, we received a complete letter of recommendations from attorney Tom Macbride setting out in detail the steps to be taken. These things were done and all the incorporation papers made ready to sign.

A group of over thirty of the smaller operators signed and the Haines Oyster Company, an oyster growers Co-operative, was formed with R. N. Steele as President, and W. Arnold Waring as General Manager. This was a matter of much gratification, especially to those who had felt for so long that it was the ultimate answer to our marketing problems.

We knew however, that to accomplish these results we must have a large supply of oysters and we must find markets for those oysters in a territory not already being served, so far as possible. We were concerned that more of the larger producers did not sign up. We decided that if we secured the markets and the operation was a success, they would be glad to come in. The first year we shipped into new territory, securing a better price than was being paid in the glutted markets of coast cities. The volume, over 100,000 gallons, was satisfactory as a start, but we needed more members. For unexplained reasons up to this time a sufficient quantity of oysters was not assured to make it the success we hoped for. It depended entirely upon the oystermen themselves. The ground work had been done, and well done. It was, and still is, an efficient organization, operating smoothly. Every gallon of oysters is graded, packed and shipped, and the grower receives the selling price less its proportionate cost of the operation. The oysterman is thus relieved of fighting the markets, of carrying a warehouse full of supplies, and of packing out his oysters. The oysters are put in 5-gallon containers, bed run, and picked up by truck. I still have hopes that a sufficient number of oyster companies will discount their objections and join in this movement to solve the greatest handicap that any industry can have, to wit, to sell its entire product at a profit.

I have gone into this matter at much length, feeling its importance from the starting of the industry. It is too late in my life to receive financial benefits, but I plead this cause in the interests of my children and grandchildren

and the Pacific oyster industry, in the interest of which I have spent so much of my life. It is my hope that I may live long enough to see the co-operative selling become a great powerful organization, and in turn the Pacific oyster industry a success of which to be proud.

Now let us return to other events of interest in 1952-1953.

In January, 1953, Dr. J. A. Kahle, State Director of Health, submitted a draft of a new law to be presented to the legislature for passage covering sanitation of waters in which oysters are grown. This bill provided also that an advisory committee of oystermen should be named by the Governor to sit in with the Director in meetings concerning the oyster industry. The law was passed and since that time we have enjoyed working through these advisors with the Director of Health to keep the industry operating under strict sanitary rules.

The annual convention was held in South Bend on August 14th and 15th. Our host, President Malcolm Edwards, showed his movie pictures of his trip to Japan. It was at this convention that a practice was started that has been followed at each convention since held. This was a can cutting program. Each oyster company was given the privilege of entering samples of canned oysters, frozen oysters, oyster stew or soup, smoked oysters, or any other oyster products. Expert judges were selected who later made a report as to the quality of each entry. This was not only interesting but was helpful to the producer to improve the quality of his product. This program has gained extensive publicity.

Malcolm Edwards was re-elected President, R. N. Steele, Vice-President, and Charles R. Pollock re-elected Secretary-Treasurer.

Mr. Whiting made his report on his extensive advertising work during the year. Oyster week was set for December 14th to 22nd. Whiting reported on the insignia program which had adopted an insignia to be used by members of the Association on stationery, etc.

The annual convention in August, 1953, left the membership in a happy and encouraged frame of mind. Geographically South Bend gave the guests a variety of scenery and a glimpse of the turbulent Pacific Ocean and of that wonderful Willapa Bay. The salmon bake was a great treat. The meetings were addressed by men well qualified on their subjects.

During the following year some changes took place, and some things of interest to the Pacific oyster industry happened. The seed oysters as usual were of greatest importance.

President Malcolm Edwards, as inspector for the Association, and Charles Woelke for the State, left for Japan early in February, 1954. This time they were gone six months. From the start many difficulties arose. Mr. Edwards reported on his trip over as follows:

*"The trip to Tokyo from Seattle consumed some twenty-seven hours total time and aside from two or three hours flying over Shemwa, Alaska, waiting for the ground crews to clear snow from the runways so we could sit down, the trip was quite pleasant."*

Up to this time I have referred many times to the Pacific Coast Oyster Growers Association sending an inspector to Japan, but have not said much as to his duties, or as to the operation in Japan by the Japanese in growing, hardening, breaking and packing the seed. Before proceeding further I should give the meaning of these terms.

*1. Growing the seed.* Racks are constructed by driving stakes in the tidal bottom located at a place where a heavy set of seed has taken place for many years.

They are driven in long rows as for a grape arbor, or in hop fields. Another row about four feet apart is driven. This continues over perhaps several acres of tide flats, the distance apart being wider in places to permit their boats to go between. Over the top of these stakes a pole is fastened, making a rack. In the meantime many workers have been busy stringing shell. The shell are supplied by opening houses where oysters have been opened and the empty shells put in piles. A hole is punched in each shell and it is strung on wire. The strings are about four feet in length. These are taken in boats and hung over the racks or across them. To these shell the embryo oyster seed attaches during the spawning season.

2. *Hardening.* In the fall after the setting has ended the seed growers gather up the strings (ren they are called in Japan), and place them on hardening racks. These racks are constructed by use of short stakes and poles, a type of open floor upon which the strings may be placed. They are now on a level higher than where they were caught so that they are only covered by the tide a few hours each day. Their food supply is thus limited and their growth stunted in size, but the cold of winter causes their shell to thicken and harden. This hardens them so they will ship better, live longer out of water.

3. *Breaking and Packing the Seed.* By late in February the packing season starts. Some of the seed after selection is washed, inspected and placed in boxes. Each box, known as a standard oyster seed box, holds a fraction over two bushel. The number of shell and the average number of seed on each shell, is specified in the contract with the buyer. These are designated as unbroken seed, indicated U. S.

Other shell are selected for breaking. They are, in fact, cut by a large blade with a long handle and the other end fastened in such a manner that when the handle is pressed down it cuts like a pair of shears. The shell, with seed attached, is so placed that when the handle is pushed down (it is a hand operation) it cuts the shell. The contract also governs the approximate size into which the shell must be cut and the average number of seed that must be on each shell. These are packed into the same size box after inspection, and are known as broken seed, indicated as B.S.

Upon his arrival home, Malcolm made up his complete report and on June 1, 1954, it was sent to all purchasers of seed in the form of a bulletin. This report is so well presented, so thorough and so comprehensive that any one reading it will not only understand the problems which arose during that year but, with the definitions I have given above, will understand that the seed, as we receive it in order that it may meet our needs and requirements, must first be produced by experts who make it a real business. Each year there are new problems, but this report is typical of the work of a seed inspector. For these reasons I feel justified in quoting liberally from that report.

## **PACIFIC COAST OYSTER GROWERS ASSOCIATION**

### **President Edwards' Report on Spring, 1954, Trip to Japan BULLETIN NO. 66**

June 1, 1954

"This report to the membership of the Pacific Coast Oyster Growers Association outlines the highlights of the inspection program carried on by P.C.O.G.A. in Japan during the 1954 seed oyster packing season. It is being written in order to more fully acquaint the membership with the problems involved in securing a uniform good quality seed through each shipment. It is my sincere hope that every seed purchaser will find the time to study it and consider quite carefully the recommendations at the conclusion of the report in the light of what securing a uniform good quality seed each year can mean to his oyster operation.

"Each packing season has its own particular problems and this one was no exception. The basic problem, however, is the matter of a coordination of effort of many varied interests and the maintenance of good UNDERSTANDABLE communications between all parties concerned. The following example will outline basically what I mean:

"First of all P.C.O.G.A., must have from you, the seed buyer, the following information. A firm order stating the type of seed you will require, the quantity and the preferred time and place of discharge. This information must then be assembled, pooled with other orders and a shipping schedule planned. Tentative loads for each vessel of the various types of seed are calculated and this information is then forwarded Tokyo Food Products Company, the exporting company. (Similar information must be given to the State of Washington Department of Fisheries who are concerned with having an inspector in Japan far enough in advance of the packing schedule to be able to examine thoroughly all hardening racks for drills. Packing for export, is not allowed until such examination is made.)

"As soon as Tokyo Food Products Company receives the basic information from PCOGA they in turn relay it to the Miyagi Prefectural Seed Oyster Growers Association, who immediately prepare the packing allocations for the initial shipment and set the date for packing to begin. Village leaders are notified by the Association, workers called and the packing commences. Your inspector must then begin his examination of the actual packing procedures and impress upon the village leaders and the workers themselves the need for uniform good quality seed. He must be prepared to initiate inspection procedures and packing requirements that will secure the best quality seed available in Japan for that particular year. His inspection must be carried on in a manner that is uniform and fair to all parties concerned.

"It takes a tremendous amount of coordination to maintain a good packing and shipping schedule. In every season there are additional orders forwarded by PCOGA in response to your requirements. In every season there are revisions in the date and time of arrival of ships at Shiogama anchorage, the loading point of your cargo. These changes must be transmitted to all concerned far enough in advance of the shipping date to make it possible to handle the change without lowering the quality of the pack.

"The quality of your seed can be affected by the time it has to stay on the holding racks after it is packed. by undue time aboard lighters enroute to the loading of the ship, and by an unnecessary speeding up of packing operations in order to meet a shipping date, and above all, by a lack of understanding on the part of the individual worker packing the seed, of the basic requirements for an acceptable product. All of the above items outlined concern the basic problem of 'maintaining good, UNDERSTANDABLE communications between all parties concerned'.

"This report to you deals with the story of the 1954 seed inspection program conducted in Japan during the months of February, March, and April.

"Mr. Charles Woelke, marine biologist, representing the State of Washington, was the first American inspector to arrive on the scene. This was his third year in Japan. He is in complete charge of the drill elimination phase of the inspection. In addition to representing the State of Washington for the drill control standpoint, he represented directly the Bendiksen Oyster Company for quality control.

"Mr. Charles Johnson, in Japan for the first time, represented the Coast Oyster Company from the quality control standpoint.

"I was the last one to arrive on the scene, landing in Sendai after an all night train ride, at 6:00 a.m., the 17th of



February. I found packing had started in all of our villages two days before. My responsibility was the maintenance of a uniform good quality seed for seed purchasers buying seed through PCOGA. I checked into the Aoki Hotel in Sendai, changed into my working clothes, and left on the first inspection trip at 8:30 that morning. On the way out to our initial packing site, Charles E. (Chuck) Woelke, who had been in the area for almost two weeks inspecting the hardening racks so that the seed strings could be cleared for packing, gave me a quick rundown on the situation. (After listening to him, I began to realize we could have a rather rough season).

"The winter had been unusually mild. Present water temperatures about 7 degrees centigrade and going up. There was a noticeable drill movement from the beginning of the season and "Chuck" was of the opinion that mating was taking place and that fresh drill egg cases could show up at any time, which would of course make the drill control problem much more difficult.

"Examination of the seed on the hardening racks had convinced him there was enough seed available to fill all orders and maintain a good acceptable quality even though the set had been much poorer than in the past two years. (This confirmed information previously forwarded us by Tokyo Food Products Company based on surveys of available crop conducted by the Miyagi Seed Oyster Growers Association).

"My first day was a rough one. The villages visited were in their second or third day of production. All had a considerable number of cases packed and on the holding racks. It was necessary to examine these thoroughly in order to determine if they were acceptable for export and as luck would have it the first village we stopped at was having trouble. They were packing broken seed. Had over 200 cases on the holding racks and were filling cases at the rate of well over a hundred a day. Examination of the ren (shell strings) during the initial wash indicated a poor pack was inevitable. For the most part the mother shells were large and very thick. Most of the spat was over 15mm in size and quite conspicuous by their scarcity. A quick look at the selection tables (the very heart of a quality seed pack) where each shell is examined by a worker, first to see there are no drills present, and second to see there is a sufficient number of spat on the shell to make it practical to save for breaking, indicated that the majority of shells were passing through to the breaking table with less than ten spat per shell and most of these over 15mm in size. Examination of the packed cases on the holding racks indicated a repack was necessary if the seed was to be exported. Most of the cases were low in fill. Most of the spat in the boxes were too large to withstand shipment. Most of the cases had less than 2700 normal size pieces of shell per case and of these from 35 % to 50 % of the pieces were either without spat or with only one spat.

"My first conference with the village leaders in charge of a packing site was just a sample of what we were to be confronted with from time to time throughout the entire season. It was necessary to tell them we couldn't accept the 200 or more cases that were already packed and on the holding racks as it wasn't suitable for export. It was necessary to explain to them why it wasn't suitable for export and it was necessary to set up certain fundamental conditions that must be met before the seed would be acceptable. To do this successfully you must have definite ideas of your own about what constitutes good quality seed, and you must have a thorough understanding of what can be accomplished by good packing procedure. You must be able to express those ideas in a manner your interpreter will understand, and he in turn will be able to convey to the people who do the actual packing. My thinking, as expressed to the growers, of what constitutes a case of export quality broken seed was as follows: (This was used by the American inspectors as the basis for accepting or rejecting seed in Japan through the 1954 season)

"1. The seed must be free from drills or drill egg cases. (Necessary to protect the American industry from possible harm by importing drill into areas not already infested) State of Washington and California laws prohibit planting drill infested seed in waters of the states.

"2. The box of seed must be FULL of shell bearing, small, alive, well hardened spat.

"3, The breaking must be of a one, two or three cut break as needed to produce a minimum of 3,000 normal size pieces in each case of broken seed. The seed shall be free, in so far as possible, from small particles of shell, debris, sea weed, etc.

"4. For broken seed at least 90% of the shell in the packed case must have two or more small, alive, well hardened spat per shell as well as meet the conditions of paragraphs 1, 2 and 3, and have a minimum of 16,000 spat per case.

"Before the season was over it was necessary to require the repacking of well over 2,000 cases of seed from a quality standpoint, about the same number of cases had to have the lids removed and additional shells added to complete the fill. This packing difficulty wasn't confined to any one packing site or grower group within the packing site.

"Early in the season a uniform inspection procedure was put into effect. The basic inspection team consisted of the inspector and his interpreter, the boat captain and deckhand. As soon as our boat would land near the packing site, the interpreter would contact the responsible party in charge of the packing operation to determine the number of cases packed by each group packing on the site that hadn't been accepted for export. In order to facilitate the inspection the cases were segregated according to grower or packing groups and date of packing. The information gathered from the village head was recorded in the inspectors' notes and ten percent of the cases packed by each group each day were singled out at random and marked for inspection. Tops of the cases were then removed by the village workers and the physical inspection of the case was ready to begin.

"While the interpreter was busy setting up the cases for inspection, I would make a thorough examination of the physical packing operation. Stopping first to observe the washing operation to make sure there was enough washing to clean the mud and debris from the shell so that positive drill elimination could be obtained and of importance to us from a quality standpoint so that the number of spat on the shell can be determined quickly. (There is always a fine line between what constitutes good washing technique and poor. Washing that is too severe can destroy a substantial portion of your seed, especially in the latter part of the season when the spat have started to put on new growth.)

"The second step is the selecting tables. Here the individual shells are examined by the selectors. Clusters are broken apart. Shells bearing a predominance of larger than 15mm spat are discarded and shells having less than ten spat per shell are for the most part eliminated. The skill of the workers at these selecting tables control to a large degree the quality of your pack. They are the ones that must eliminate the drills and drill egg cases, they are the ones that determine if there is enough of the right kind of spat on the mother shell to make it practical to pass on to the breakers. (One or two careless workers at a selecting table can effect materially the quality of seed packed by that particular group.)

"The third step is the breaking table. The shells come to the breakers from the selecting tables and are processed by the breakers at a very rapid pace. There is no chance for selection here in the normal packing operation. The breaker determines almost instantly whether the shell should have a one, two, or three cut break. They are trained to break the shell to the required size. This piece size is influenced somewhat by the quality of the ren the particular group is working with. (Heavily spatted shell will stand finer breaking.)

"Whenever the inspection indicated serious trouble a conference was called immediately by the inspector. The workers responsible for the unsatisfactory condition would then be instructed by the inspector, through his interpreter, what the difficulty was and ways and means to correct the situation were worked out on the spot.

"By the time the tour through the site was completed the packed cases would be ready for examination. A pre-determined number of shells were examined from each case. All shells that were determined unsuitable for export were placed on the top of the case being examined so that the village leaders and workers could examine them to see why they weren't suitable. The physical results of the inspection were evaluated by the inspector and recorded in his note book. At the conclusion of the inspection, the group heads were called into conference and the results of the inspection evaluated for their information. If conditions were good or poor they were advised. If repacking was indicated, additional cases were examined until a full analysis of the condition could be made and repacking would be ordered on the basis of the findings.

"The above outlined procedure was carried on throughout the 1954 packing season with the intensity of the inspection increasing or decreasing as the history of the village or grower group indicated was warranted. In a few isolated instances it was necessary to make 100% examination of cases in order to prove the product. Other villages, a 5 % examination proved to be ample to insure a uniform good quality seed.

"Chuck's' concern over the drill activity increased as the end of February drew near and well it might for the water temperature continued high. On March 1st, live drill egg cases were found in a packed case of seed. Packing was immediately stopped on all packing sites and a meeting between the buyers' representatives, the exporters, the Association heads, the village heads, the Central and Prefectural Government inspectors, was called for that evening. Prior to the meeting a consultation was held between Mr. Woelke, Mr. Johnson, and myself, at which time a tentative solution to the problem was worked out and a tentative set of regulations drawn up and agreed upon. The program was submitted in draft form that evening to all other interested parties and accepted without change. The essential points in the draft were as follows:

1. The occurrence of live drill eggs in the packed boxes of seed is a direct violation of the State of Washington laws concerning the importation of seed oysters. In view of this violation I, (Mr. Woelke), am technically justified in terminating the seed oyster season right now.

HOWEVER: If the growers can demonstrate, through limited experimental pack, that they can pack drill free seed it will be possible to successfully complete the seed oyster season.

2. Before a limited pack can be started, all growers and workers must be advised of exactly what shall be required of them. (Chuck did this personally, talking to all growers and workers).

3. The requirements are:

(a) No drill egg cases (live or dead) shall be permitted in the boxes. **PENALTY SHALL BE TOTAL REJECTION OF DAY'S PACK BY THE GUILTY VILLAGE OR GROWER GROUP AND THEY SHALL BE PROHIBITED PACKING THE REST OF THIS SEASON.**

(b) No snails (other than drills), scallops, starfish, blue shell mussels or wire shall be permitted in the boxes.

**PENALTY SHALL BE REPACKING OF THE DAY'S PRODUCTION BY THE GUILTY VILLAGE OR GROUP. POOR QUALITY SHALL CONTINUE TO BE CAUSE FOR REPACKING.**

(c) Any excessive quantities of mud, nori, unseparated valves of adult oysters, unseparated clusters or debris, will call for a strong verbal reprimand.

Should carelessness continue, more severe penalties will result.

4. The time deadline existing from now on is April 15th rather than the originally requested March 25th; therefore, so long as the growers can pack drill free seed they have plenty of time and need not rush in fear that I may close the season. The only thing that will terminate packing shall be the carelessness of the individuals packing the seed. (End of draft text)

"By the evening of March 3rd, meetings had been held in all villages. Some 1,400 workers had been advised on the conditions and packing was proceeding at about 50% normal capacity.

"In order to be certain the villages were packing drill free seed of an acceptable export quality it was necessary to step up the inspection intensity, Our thinking at the time being "The matter of acceptability of the product for export would have to be determined by the American Inspection Service." This meant in order to accomplish a complete inspection each day we would have to work out a schedule of inspection that wouldn't overlap. On paper it sounds easy, but in the field it was a real problem. (My first inspection of a site packing Coast Oyster Company seed or Charlie Johnson's first inspection of a site packing PCOGA seed will be long remembered by both of us as well as by the Japanese seed oyster grower, and export companies.) There is a very intense rivalry between the two associations in Japan and the same is true about the export companies acting as agents for the associations. To accomplish the inspection intensity that was needed to insure completing the season, all organizations had to cooperate wholeheartedly. Before another week had passed we became accustomed to working together and we were getting a drill free acceptable for quality seed packed. It soon became apparent to all that our inspection was impartial, that it turned up the good as well as the evil in a pack, and that they could pack an acceptable quality seed by exercising care in selection even though the set on the ren was relatively poor.

"Our season was a long one in which all American inspectors worked from 12 to 14 hours a day, seven days a week in the field making the actual inspection, and followed through in the evenings with from two to six hours of conferences. The length of the conference being determined by what part of the season you were in, what association, exporter or Governmental Agency you were conferring with. It is sufficient to say that by the time our last ship loaded we were getting a little worn around the edges.

"The second fundamental difference of opinion when considering the spat count in a case. The Government regulation calls for 16,000 or more spat per case. There is nothing in the regulation that states the case must be full of shell bearing small, alive, well-hardened spat. Consequently, the Governmental inspection forces felt the spirit of the regulation had been fulfilled when the case had 16,000 spat in it. We didn't accept seed for export unless the case was FULL and further required that more than 90% of the pieces in the case must have two or more spat per piece and there shall be a minimum of 3,000 normal size pieces in the case.

"This quite naturally brought on a rather difficult situation between the inspection forces. The Japanese inspector basing his actions on a Government regulation that unfortunately didn't coincide with the buyers' need for quality was in an extremely embarrassing position through no fault of his own.

"In an effort to work out these differences a great many conferences were held. First with the field inspection forces and their superiors in Sendai, and finally in Tokyo on April 12th, with the Minister of Agriculture and Forestry, Japanese Central Government. Invited to attend the final conference were the Governors of Miyagi and Kumamoto Prefectures, the Chief of the Fishing Board of Japan, the Chief of Trade Division, Ministry of International Trade for Industry, the Chief of the Export Commodity Inspection office, representatives of Tokyo Food Products Co., Daiichi Trading Co., Nozaki and Co., Ltd., Miyagi Prefecture Seed Oyster Growers Association, Matsushima wan Urato Seed Oyster Growers Co-op., Association, Mr. Charles E. Woelke, and myself (Charlie Johnson had returned to the U.S.)

"A thorough discussion was entered into concerning all phases of the inspection service. The possibility of revising the present Government regulation to a point where it more nearly suits the buyers' needs who also explored and it is believed some modification along the lines we have suggested will be made before next export season. Tentative meetings were set for the last week in January, 1955, between the American inspection forces in Japan, and representatives of the Ministry of Agriculture to perfect plans for the 1955 inspection.

"These conferences, as mentioned before, were quite numerous and at times trying to the soul. It is too early to be able to evaluate their worth to us. At the present time I feel it would be wrong to rely completely on Japanese Government inspection for either drill control or quality. My only hope is that a more thorough understanding of our needs can be brought about through these discussions and through such understanding certain revisions can be made in their regulations that will bring about field inspection practices more nearly in line with our requirements. It will still be necessary for us to make the inspection that will either accept or reject the seed.

### **RECOMMENDATIONS**

"(1) **QUALITY**:-Continued efforts should be put forth to secure top quality seed. This can be done by determining our needs when thinking of quality and then making sure the growers and associations who are responsible for securing the seed for us understand our basic requirements and the reasons for them. The need for a thorough and well written contract and close supervision of packing will become more apparent as our requirements for seed increase.

"For those who have the ground capable of handling it, the high count seed should be the answer. This will prove true, however, only if you have good, safe, well-protected ground.

(Our final yield from a case of seed is affected directly by the number of normal size pieces of shell bearing spat in each box. The number of normal size pieces of shell that are possible to get in a case of seed is controlled by the size of the piece, the size of the spat on the piece, by the presence of shell clusters in the case, and by the thickness of the mother shell. It is possible through our contract and through education and through inspection to control all four factors to a certain extent. It is my firm opinion, uniform, good quality seed isn't something that just happens because of a good setting year. A top quality seed is something that can be purchased each year if you insist on it, are willing to work to get it, and will pay the price of producing it for you.)

"(2) **CONTRACT SPECIFICATIONS**:-Our contract with the Miyagi Seed Oyster Growers Association should be re-written completely to incorporate in its structure fundamental requirements for quality and should also define inspection procedures. The final framing of the contract should be the responsibility of the seed committee and all seed purchasers should be asked to express their opinion in writing on the matter.

"(3) **INSPECTION**:-In order to protect the buyers' interest it is necessary for our association to provide inspection for quality in Japan. The inspector should get there at least two weeks in advance of the packing season and be prepared to work seven days a week, twelve or more hours per day. He should be prepared to stay in Japan until an business has been taken care of, including conferences that take place at the conclusion of packing. It would better serve the seed purchasers' interest to have the same man make the inspection each year if at all possible. (I say that not because I hope to be that man for the next several years, and I do, but because I feel it takes at least one season in Japan to actually get to know what is going on about you, and each season thereafter will add to your ability to do a good job.) If it were generally known this were to be a continuing job for the same man the long range planning that is necessary to get the best possible seed would gain continuity, and I am sure you, the seed buyer, will be able to measure the worth to you in a more uniform yield, and in an increased yield from your seed.

"(4) SHIPPING:-Continuing effort should be put forth on the part of your Association to secure the best possible freight rates consistent with the handling needs of your cargo. Shipping schedules should be planned that will allow ample time for packing between cargoes. An attempt should be made to ship cooperatively with other exporters if it will benefit our people in any way. An effort should be made to pack as much of seed as possible early in the export season.

"In concluding this report to you I would like to convey my thanks and the thanks of the officers and members of PCOGA to the following people who worked so unselfishly through the season in order to pack and ship our seed.

"MR. CHARLES 'CHUCK' WOELKE. A good right hand in time of need if there ever was one. His untiring efforts to maintain drill free quality seed for all concerned went considerably above and beyond the call of duty.

"MR. CHARLES 'CHARLIE' JOHNSON. Coast Oyster Company's representative, who pitched in and gave all of us a hand even though his job could have been relatively easy if he had insisted on staying with his own group.

"DR. TAKEO IMAI. Professor, Tahoku University, pinch hitting as an interpreter for us when the going was rough and we needed a neutral interpreter to do the job.

"MR. K. HONDA. Genial manager of the Sendai Branch Office of Tokyo Food Products. Always ready to lend a hand when needed.

"MESSRS. T. KANNO AND E. KATO. President and Secretary of the Miyagi Seed Oyster Growers Association who so ably assisted us during the season.

"INTERPRETERS: HASEGAWA, TOMINAGA, NAGAIKE AND TSURU. Through whose voices we were able to maintain communication throughout the season. (At least one of the four were with us constantly day and night whenever there was work to be done.)

"MR. K. MIURA. Managing Director Miyagi Seed Oyster Growers Association whose leadership is never questioned. Even though unable to come to his office most of the season because of ill health he found time to attend several of the most important conferences and give us all a portion of his strength just by being there.

"PACIFIC COAST OYSTER GROWERS ASSOCIATION"

Respectfully submitted:  
Malcolm B. Edwards, President

This seems to cover the seed problems for that year except to explain what is meant by Kumamoto seed" and "hi-count" seed mentioned in the report. The Kumamoto seed is from a different species of oyster grown in a different locality than the *Ostrea Gigas*, or Pacific oyster as we know it. It is a much smaller oyster, in fact only about twice the size of our *Olympia* oyster. It is difficult to secure and although it may work out very well in certain localities, up to this time has not proven to be a complete success.

Hi-count seed is the same as other seed except that where there has been a very heavy set and the mother shell has been cut in smaller pieces, each with seed attached, a much higher count of oyster seed per case results.

Following this report the Trustees passed a motion by Dr. Elsey that steps be taken to employ Malcolm Edwards for a period of years to make regular annual trips to Japan as seed inspector and to represent our Association in other ways. The Trustees approved the recommendation that early estimates be made by June 15th if possible, of the oyster growers seed requirements for 1955; also that the agreement signed by Edwards for Pacific Coast

Oyster Growers Association and by the Japanese Agent, Tokyo Food Products Co., Ltd., be approved.

During the year 1954 the pollution committee originated and promoted new tactics to meet the ever increasing problem of pulp mill pollution and its deleterious effect upon oysters. It became apparent that before relief could be had it would be necessary to arouse public indignation against destruction of our natural resources, our fish, shell fish and crabs.

Biologist David McMillan was chairman of the Pollution Committee. He and his committee headed up the organization to be known as the Pollution Control League. The reasoning behind the movement was to increase public opinion. against pollution by writing and working with other groups and organizations in the state who felt as we do concerning this serious problem. Sports clubs, women's clubs, Granges, and fishermen's clubs were contacted and were interested.

On May 26, 1954, the organization meeting was held at the Olympia Country Club. It was an all day meeting and was well attended. The idea of clean waters for our rivers and Puget Sound and the preservation of nature's bounty met enthusiastic approval, and the "Pollution Control League" was organized with David McMillan as its president; Ted Lloyd, Washington State Grange, vice-president; Irwin Clark, Jr., Washington State Sportsmen's Council, secretary-treasurer. Trustees: Joe Burrows, Puget Sound Gill-netters' Association; Judson C. Colburn, Washington State Resort Association; W. D. Evans, Boeing Airplane Company; Mrs. F. D. Mack, Federations of Womens Club; Ken Knowlton, Save Our Salmon League; Dr. C. M. McGill, chairman, Pollution Committee of Washington Health Council; Norman Richardson, chairman, Pollution Committee, Washington State Sportsmen's Council; A. F. Raiter, manager, Tourist Division, Spokane Chamber of Commerce; and Mrs. Arthur Skelton, Washington State Parent-Teachers Association.

Mr. Dick Whiting was given much credit for the organizing work. Mr. Dave McMillan was given a vote of thanks for a good job well done. This organization has no doubt done much toward the molding of public opinion in this state.

Mr. McMillan also sponsored a drive to establish numerous test stations to gather data. An attempt was made, with partial success, through the cooperation of the State Fisheries Department, State Game Department and the Pollution Control Commission.

F. W. Mathias reported that the Public Relations Counsel was contacting the editors of "Field and Stream", "Outdoor Life", "Sports Afield", and "Pennsylvania Sportsman's Groups" for support, and data information from other states.

The annual meeting was again held in South Bend, Washington. Again we enjoyed the hospitalities of our Willapa Bay hosts, Malcolm Edwards, Ivan Holmes, Stan Gillies and others.

Again the Oyster Clinic was a grand success under the supervision of the late Dr. Ray W. Clough of the National Cannery Association. Submitted for examination and award of merit were 45 cans of whole oysters; 21 cans of oyster stew; 15 cans of smoked oysters, and 12 samples of frozen oysters.

Glenn DeHaven, librarian, reported he now had thirty-five bulletins in his library which treated on oyster subjects, and was enlarging the collection rapidly.

Approximately \$18,000 was spent for advertising during the year with satisfactory results.

Dr. Elsey, Malcolm Edwards, F. W. Mathias, and R. N. Steele were re-elected as Trustees. At the first meeting of

the Trustees they voted to postpone the election of officers for sixty days, the existing officers to carry on during that time.

It was suggested by John Wiegardt that an amendment to our by-laws be prepared for later consideration, providing that a Trustee's tenure in office be limited to two successive three-year terms, but that after one year he would be eligible for election again. I can well remember John's remarks in presenting this. To quote: "Us old fellows have been serving so long we are all spawned out. We need some younger blood and their new ideas in the Association and we need rest." I, for one, agreed with him. This amendment was afterward adopted and now at the time of writing this, the last of the old timers have been retired from the Trustees. The younger men have taken over and are conducting things in a capable manner. Mr. Bailey made mention in the Trustees meeting that at an unannounced date the U.S. Health Department would hold a meeting in Washington, D. C., to consider before adoption a new manual of regulations to bring up to date the health requirements for the oyster industry. At the same time there would be held in Washington, D. C., by the National Shellfish Conference a meeting to consider the apportionment of Federal funds as provided in the Saltonstall Bill. Mr. Bailey proposed a resolution, which was passed, that our delegates attend both conventions and use every effort to secure a part of the funds for use in the interests of the Pacific oyster industry on the west coast.

The banquet, as always, was a very popular event. David Wallace, Director of the Oyster Institute of North America, was principal speaker. His subject was "The new look in the oyster industry." He gave us the highlights on the oyster in the East, and some observations and suggestions on the Pacific oyster industry. He proved to be an excellent speaker, with an interesting subject. Short addresses were also made by state officials of Washington, Oregon and California Departments of Fisheries, Biologists, and food fish economists.

The date was finally set by the Public Health Service that the National Conference on Shellfish Sanitation would be held in Washington, D. C., on September 9 and 10, 1954.

In the correspondence that preceded that meeting the Washington Department of Health and also members of the oyster industry implied that the system under which we had operated since 1925 might be changed. That system was that the State Department of Health issued the permit or certificate to the grower or the oyster opening house or packer when satisfied that the requirements of the state manual were being complied with. Their decision was final, a state certificate was issued and a copy furnished to the Federal Department of Health, Education and Welfare, who, as a matter of course, recognized said certificate in interstate shipments. The fear was that this would be changed so that the Federal authorities would have the decision as to whether the certificate would be issued.

Further it was feared that sanitary rules might be adopted which should only apply in those states, particularly on the East Coast where the tides vary but little and do not uncover the oyster beds when low. Here we have a great variance between high and low tides, the tides cause a swift flow of water and the beds are uncovered for hours. The effect of these differences of tides could be well known only by our own Department of Health, and to permit Federal control might be very harmful.

Dr. J. A. Kahl, Acting Director of the Department of Health, called a meeting with the Shellfish Advisory Committee with other oyster growers present as guests. All were in favor of state control, but it became apparent that it was of great importance that we must be well represented at that meeting.

The result was that the Pacific Coast Oyster Growers Association sent its president, Malcolm Edwards; the Olympia Oyster Growers Association sent David McMillan, and I was sent by the Haines Oyster Co-operative and Rock Point Oyster Company. The State Department of Health was represented by Mr. Ed L. Rupert.



Those were two strenuous days. Our delegation worked behind the scenes as well as in the meetings. We accomplished our purpose. In due time the new manual was prepared, printed and adopted. It fully protects the public health so far as sanitary conditions are concerned in the growing and processing of oysters.

As suggested in the resolution above set out, President Edwards also attended the National Shellfish Conference in its consideration of the division of funds as provided in the Saltonstall Bill. He presented the facts by reason of which the Pacific oyster growers felt they were entitled to a part of said funds. He was advised that the funds had been pledged, or so much of it as was presently available, but he was promised consideration later when more funds would be ready for use.

On October 9, 1954, at a meeting of the Trustees, President Edwards reported that correspondence with the Japanese had developed the fact that there was much confusion and uncertainty as to their ability to supply our demands for seed in the spring of 1955. It was decided that Mr. Edwards should leave at once for Japan to find out the facts. He did so and returned about November 23, 1954. He reported that our requirements could be met up to 40,000 cases, and asked that seed contracts be signed at once.

Thirty-three thousand four hundred and sixty-eight cases of seed were received in the spring of 1955 at a total cost of \$207,038.37.

In early December, 1954, Congress had under consideration an amendment to the trade agreement between the United States and Japan. The Pacific Coast Oyster Growers Association registered its opposition to any lowering of present tariff on imported oyster products, as their prices in this country were already 25% below our prices on steamed canned oysters and up to 40% on smoked oysters.

The annual meeting was held in Shelton, Washington, in August, 1955. Under the by-laws as amended, the following Trustees were not eligible for another term: Roy Wilson, R. H. Bailey, Glen DeHaven, Stanley Gillies, Arnold Waring and John Wiegardt. They were given a sincere vote of thanks for their many years of faithful service in the interests of the industry.

After careful consideration of reorganizing the administrative affairs of the Pacific Coast Oyster Growers Association the Trustees had decided to employ a full time Managing Director. As Malcolm Edwards was available and had proven his ability as President and as seed inspector, he was so employed. Therefore he became the retiring President. The newly elected members of the Board of Trustees were: Messrs. Bob O. Bower, Earl R. Brenner, Edward J. Gruble, Lee J. Wiegardt, Theodore Wilson and George M. Yanagimachi. R. N. Steele was elected President, B. L. Taylor, Vice-President, and C. R. Pollock Secretary-Treasurer.

It is with great pleasure and pride that the annual report for 1955 was dedicated to "Dad" Steele. This has now become a custom, to dedicate the report for the year's activities to one who is thought to deserve that honor. A copy of all such dedications to date will appear as an appendix at the end of the book.

May I also plead guilty to acceptance with pride the fact that my son R. N. Steele, has taken the active part he has in the Pacific Coast Oyster Growers Association, and that he was chosen as President in the 1955 annual session.

I have already stated, and the chapter on statistics will show, that some of the larger oyster growers were purchasing seed in Japan. This had increased each year. A large part of that seed went into Humboldt Bay, Morro Bay and Drakes Bay. The oysters produced much better than had been expected. They grew very fast. It is stated that the first seed planted in Humboldt Bay produced one hundred or more gallons of oysters per case of seed. The Coast Oyster Company got control of about four thousand acres of potential oyster land and increased their seed plantings very rapidly. It was at once apparent that these plantings would soon swamp the oyster markets,

resulting in heavy surpluses and tend to again bring about cut prices and price wars. A special meeting of the Trade Practice Committee, W. Arnold Waring, chairman, was called to discuss the marketing problems facing the industry during the coming season.

But this situation developed other problems. The seed buyers in Japan naturally wanted their ever increasing orders to be filled and also wanted the best available seed. The Pacific Coast Oyster Growers Association had one hundred and thirty growers for whom they purchased seed. The outside buyer's orders became equal to or greater than the Association orders for seed. In fact they became competitive buyers. It was reported that on at least one occasion they (the outside buyers) contracted to pay \$1.25 per case more than the going price for 40,000 cases of seed, with a five-year contract. However the growers who had been supplying the Association, the Miyagi Seed Growers Association, stayed with them. In turn, Mr. Edwards was authorized to contract in advance for seed up to 40,000 cases. He was authorized to employ Japanese help in checking the quality of seed.

Mr. Edwards handled the situation very well, but these conditions have resulted in increased costs for seed ever since.

On July 8, 1956, Malcolm Edwards was stricken by a serious illness and hospitalized in Seattle. It became apparent that he would not be able to make a trip to Japan in the fall. Considering conditions in Japan and the need to inspect the seed set and other conditions there to assure us that our orders in the spring of 1957 would be filled, it was decided to send Stan Gillies and B. L. Taylor, the vice-president. This was authorized at the annual meeting on August 6, 1956. Stan was chairman of the seed committee. He reported, "The Coast contract will become a definite factor in our negotiations to establish price this fall."

The annual convention was held in Ocean Park, Washington, and was a three day session, August 15, 16 and 17, 1956. Lee Wiegardt was chairman. It was a memorable occasion. The oyster can cutting was better than ever. The ladies were well entertained by Mrs. Lee Wiegardt. The banquet was held at Moby Dick Hotel. Congressman Thor C. Tollefson was the principal speaker, followed by other entertainment.

At the annual meeting Vern Hayes resigned as a Trustee and C. V. Shephard was chosen to fill the vacancy. B. L. Taylor was elected President, Lee Wiegardt Vice-President, and again C. R. Pollock Secretary-Treasurer. Malcolm Edwards was again employed as Managing Director for the fiscal year 1956-1957.

It is worthy of note that we were honored by having the following representatives from the Oyster Institute of North America: William P. Ballard, President; David H. Wallace, Director; Messrs. Frank Miles and Dick Lore, Board Members; and C. Francis Beavin, President of the National Shell Fisheries Association.

During the fiscal year 1956-1957 the seed problems in Japan and pollution in Washington, Oregon and British Columbia occupied much attention by the Pacific Coast Oyster Growers Association.

As has been stated its Vice-President, B. L. Taylor, and Stanley Gillies had, because of the illness of President Malcolm Edwards, been sent to Japan to straighten out some problems in regard to seed. On September 18, 1956, Mr. Taylor made his report. Rather extensive quotations from his report will give a clear understanding of the situation:

"A great insight and a much clearer picture can be obtained by visiting the seed sites in Japan.

"I have always been the biggest advocate of buying seed as cheaply as possible and drawing a hard bargain. After my visit to Japan, I no longer have this feeling. It now appears the most important program our industry has to do is keep the Miyagi Seed Growers Association in business. As odd as it seems, the poorer the set in

Japan, the more we must pay for our seed. The better the seed set, the less we pay.

"How does this come about? Simply this, our main object should be to keep a strong healthy Miyagi seed producing group. If they have a poor set it means between 30 to 40 ren must be used to make one box of seed. Since each grower plants only so many ren, his income is reduced. If, by the same token, they have a good set, only 10 to 20 ren is needed to make a box of seed and his income increases.

"As an example, there are 1000 growers in the Miyagi Seed Association. This year we will purchase about 34,000 cases of seed. If the seed orders were divided evenly, each grower would produce 34 cases of seed for a yearly gross income of \$183.60. This kind of income does not make a strong association.

"Mr. Edwards, on his last trip to Japan, presented the Miyagi Association with a group of requirements they must do to maintain their strength. One of the items was to reduce their packing sites from 17 to 7. After much discussion, we authorized 8 sites instead of 7. This was done for a reason; to make their own operation more workable.

"Another thing that is very plain after talking to the people of the Miyagi Seed group; they have great confidence and respect for Pacific Coast Oyster Growers and the people that represent us. It is important that we maintain that respect.

"We must never lose sight of the fact we are not dealing with the Miyagi Seed group alone. They have Tokyo Food Products and the Miyagi Prefecture Govt. in their corner. In other words, should our dealing with the Miyagi Seed group appear unfair, or we appear to take advantage, Tokyo Foods and the Prefecture Govt. will step in. If there is one thing we do not want, it is for the Prefecture Govt. to take control of the seed business. At the present time there seems to be no danger of this. We must always keep it that way.

"In our dealings this year, the Miyagi seed group, because of a poor set, ask for 50 cents per case increase. We did not feel our association could stand an increase that large. We did, however, offer a 30 cent increase after we were released from our 40,000 case contract. After some discussion, the price of seed for the 1957 shipment was set at unbroken \$4.70, broken \$5.40 (price to grower F.O.B. Shiogama, Japan)."

Following this report Mr. Edwards, Managing Director, made the following comment:

"The Miyagi Seed Oyster Growers Cooperative Association will suffer a very serious loss if PCOGA orders fall very far below the 40,000 case mark. Because much of the seed oyster business in Japan is conducted on GOOD FAITH AND UNDERSTANDING BETWEEN CONTRACTING PARTIES we have been released from the contract requirements of 40,000 cases for 1957 delivery. This release will not alter the situation from the standpoint of the Miyagi Association. THEY SIMPLY WILL HAVE A VERY ROUGH TIME FINANCIALLY IF THEY SELL LESS THAN 40,000 CASES OF SEED IN 1957. For this reason we are asking each of you to take serious stock of your needs and place your orders with PCOGA as soon as you can and for as large a quantity as is practical from your standpoint."

Due to our representatives in Japan the oyster growers came out very well in the spring of 1957. The seed was better than could have been expected considering conditions in Japan as above set out. Mr. Edwards (after his recovery) with the assistance of Stanley Gillies and one Japanese assistant as inspectors, secured and delivered 28,000 cases of seed at a cost of \$204,365-66 or \$7.29 per case, F.O.B. Japan. In his report at the following annual meeting President Lee Wiegardt commented:

"The 1957 seed year was the year that proved that our seed program was correct and right. Mr. Edwards set up

this program several years ago and since that time it has been discussed both pro and con. At various times it has been under fire from different members. I think that I can say that this year Mr. Edwards' seed program has proven itself. With a semi-competitive situation existing in Japan this has been more difficult than would appear on the surface. I personally feel that we have not only come out on top in our inspection program but have also gained a great deal in our public relations with the Japanese people. There is no question that last year our members paid much less for their seed when costs are figured on an ultimate yield basis. We all owe Mr. Edwards a vote of thanks for the tremendous effort that he has put forth to make this program a workable one."

One of the things done in Japan to improve our public relations was a grant of \$1,000-00 per year to Tohoku University in Japan for research work on oysters. The principal research will be to develop better methods of catching, hardening and processing seed oysters. That amount in our money is equivalent of \$15,000.00 in Japanese money.

In regard to pollution, at the annual meeting President Wiegardt made the following statement:

"The 1956-1957 year saw the greatest progress that we have made in many years on our pollution program. It has been an uphill battle for years. Largely through the untiring efforts of the Pollution Committee and the Chairman, Bob Bower, we are making progress that we hope will ultimately lead to the solution of the problem."

The previous legislature had made an appropriation of \$75,000.00 for a two year study of the effects of sulphite mill wastes on oysters. The study is being carried on by the State of Washington, Department of Fisheries, under the direction of Cedric Lindsay of the Shellfish Management, Unit Advisory Committee. This work is now being carried on, and the Advisory Committee of oyster growers meets at the Quilcene Laboratory every two months to inspect work being done.

To this date progress is acceptable to the oyster growers, who gave the program a wholehearted endorsement.

As the growing of Pacific oysters has expanded into Oregon, California, British Columbia and Alaska, pulp mills have also been constructed in many places, subjecting the oyster beds to this poisonous trade waste. Especially in Oregon this is being combatted vigorously. The Oregon State College, Department of Fish and game, is progressing rapidly under direction of Professor R. E. Dimick. Part of their experiments and studies are devoted to the effect of sulphite trade waste on oyster larvae.

Another very important study that is being used for research work is oceanography. -the Department of Oceanography, University of Washington, has developed an automatic water sampler which has been installed in Hammersley Inlet near the Shelton mill. Samples are drawn every hour which enable them to get a continuous picture of the water quality at the station. A contract has been let to develop a model of South Puget Sound and water quality studies are continuing.

In North Puget Sound, especially in Samish Bay and Padilla Bay, conditions were reported as being very bad. The oyster beds were being damaged almost as much as lower Puget Sound, which threatens extinction. An organization of oyster growers (named Puget Sound Oyster Growers) was formed to combat it.

One advance in pulp mill construction had been made by the Weyerhaeuser Lumber Company. It was the use of what is known as the Magnesium Oxide Process. It so effectively takes care of the waste that after an examination of the plant Bob O. Bowers, chairman of the Pollution Committee, asked that a letter of commendation be written to Weyerhaeuser Lumber Company for introducing it here.

In the spring of 1957 several things happened. I have explained how in Japan competitive bidding for seed between the Pacific Coast Oyster Growers Association and outside buyers had complicated the work of our general manager and inspector, Mr. Edwards. Malcolm was reporting these matters as best he could from Japan, but differences arose. Questions had to be decided quickly. The Trustees met and contacted him by phone and wire. He was at variance with instructions. In the late fall of 1957, he tendered his resignation to be effective January 1, 1958. My only comment is that he did a wonderful job for the Pacific Coast Oyster Growers Association; he was efficient and loved his work. The members of the Association had often passed resolutions commending his work, and his leaving was a shock to all of us.

In January, 1957, we lost through death another of our old time members, Fred A. Gries of Tomales Bay Oyster Company, San Francisco, California. He was an oyster grower who had been a Trustee for many years, representing the oyster grower members of Pacific Coast Oyster Growers Association in California. Fred was a friend to all and at his passing all felt that he would be greatly missed.

During the year 1957 we also lost Louis Wachsmuth, well known oysterman and operator of the Oyster Bar in Portland, Oregon; Jesse Hayes of Bay City, Oregon, formerly a member of the Fish Commission of Oregon, and active in oyster cultivation operations in Tillamook Bay, Oregon, and R. D. Turner of the Similk Beach Oyster Company of Anacortes, Washington.

In February, 1957, our President, B. L. Taylor, resigned. This also was greatly regretted by all. His business interests changed. A resolution was passed thanking him for his fine services in the interest of the industry and wishing him success and future happiness.

The Trustees filled the vacancy and Lee J. Wiegardt was elected President. Lee had been Vice-President. Edward J. Gruble was elected VicePresident.

About that time Mr. Eldridge, Director of the State Pollution Commission, resigned, and Alfred T. Neale was appointed Acting Director.

In June, 1957, President Lee Wiegardt was sent as a delegate to attend the annual convention of the Oyster Institute of North America.

During the year a new method of advertising was adopted. Our old friend, Matt Mathias, long time Trustee, took on a new vocation, and became known as "Oyster Chef Supreme". He took on the responsibility of instructing students in Home Economics, Hotel and Restaurant Management, in the fine art of preparing and cooking our famous Pacific oysters. His first assignment was at the Washington State College, Home Economics Division. Bob O. Bower assisted him. Matt lived up to his title. If he could have reached every home in the State of Washington with his demonstration there would not be enough oysters grown to supply the demand.

In the elections of 1956 we changed administrations, and Governor Rosellini appointed Milo Moore as Director of Fisheries. Under a previous administration Milo had occupied that position and had proved to be a very good friend of the oyster industry. He was welcomed home again and written a letter by our Managing Director, Malcolm Edwards, pledging our cooperation in his work.

The Legislature in 1956-1957 passed a law with an appropriation of \$40,000.00 to provide facilities for a U. S. Public Health Service research team to study and set up sanitary standards for West Coast, oysters.

It will be noted that throughout this history of the Pacific oyster those engaged in the industry have not only

participated in but have been leaders in the development of laws and regulations governing sanitary requirements relating to oyster beds, harvesting, shucking and packing of oysters. It has been our desire that the public be protected in every way from receiving even one container of oysters that have been exposed to any unsanitary conditions. That was true also in the Olympia oyster industry before the introduction of the Pacific oyster in our waters. In my recent book "The Rise and Decline of the Olympia Oyster" that subject was treated rather fully.

The industry was represented at every conference, either State or Federal, that was held for the purpose of advancing sanitary practices. I, myself, made several trips to Washington, D. C., for that purpose. Finally the Pacific oyster industry has been expanded to a size both in area and production that the United States Department of Health has recognized the importance of having a laboratory located here where problems could be studied in the heart center of the industry. In 1957 Earl R. Brenner, grandson of the late pioneer oysterman, J. J. Brenner, was chairman of the Legislative Committee. This Committee sponsored the law above referred to and furnished much of the information leading to its passage.

Recently the following announcement was sent out pertaining to the opening of the laboratory:

STATE OF WASHINGTON  
DEPARTMENT OF HEALTH  
Official Opening  
SHELLFISH SANITATION LABORATORY  
PURDY, WASHINGTON  
November 14, 1958

You are cordially invited to attend the official opening of the Shellfish Sanitation Laboratory at Purdy, Washington, on Friday, November 14, between the hours of 2 and 5 p.m.

This facility is a joint venture of the Washington State Department of Health and the United States Department of Health, Education and Welfare, Public Health Service. The State of Washington, through an appropriation in 1-1957, has constructed the facilities and will maintain the buildings. The Public Health Service has assigned personnel from its Sanitary Engineering Center to operate the laboratory, conducting experiments relating to the sanitary bacteriology of the harvesting, processing and marketing of commercial species of shellfish in this area.

This invitation is being extended to the Governor and his staff, legislators, representatives of the shellfish industry, Public Health Service regional and administrative officials, state and local health department personnel, representatives from universities and research facilities, and others.

The laboratory is located midway between Bremerton and the Tacoma Narrows Bridge at the intersection of Highways 14-A and 14-B (Purdy Junction).

This is, in my opinion, of tremendous importance to the industry, and, more important, to the public; an assurance that the past record of the oyster industry will be maintained. So far as we know there has never been a case of sickness where unsanitary oysters have been the cause.

We now come to the annual convention of the Pacific Coast Oyster Growers Association. To this writer it is one of the most memorable occasions of my life. First, it was held in Bellingham, which is but a few miles from the oyster beds of the Rock Point Oyster Company where the Pacific oyster industry was born thirty-five years before. It was the twenty seventh anniversary of the Pacific Coast Oyster Growers Association. Second, my son, R. N. Steele, was chairman of the convention committee, well supported by his committee members, Earl P. Morgan, Edward J. Gruble, C. V. Shephard and William G. Gardiner. My daughter-in-law, Hellen Steele, was hostess to

the ladies at an afternoon tea held at her home on the Chuckanut Drive overlooking the oyster beds. She was assisted by my daughter, Mrs. Peggy Hinton, my wife, Clara, and Mrs. Earl Morgan. Third, the convention headquarters was the Bellingham Hotel. It was not only a commodious and beautiful place but its management was hospitable and co-operative. Also they have always been boosters for Pacific oysters. Bellingham was not only the first city where Pacific oysters were demonstrated and sold, but today the per capita use of Pacific oysters is greater than any other city. Fourth, but not least, was the dedication of the program to my dear old friend and for so many years my fellow worker in the interest of the Pacific industry as member, Trustee, Vice President and President of the Pacific Coast Oyster Growers Association, the late John L. Wiegardt. The dedication will be found as an appendix to this book. Little did we know that his tragic end was so near at hand and that the next convention he would attend would be in the great hereafter, where I hope to meet him and so many other good friends who have gone before.

The convention lasted three days, August 15, 16 and 17, 1957. Arnold Waring was chairman of the "Oyster Cutting" program. As the industry had grown the importance of processed oysters had become recognized, and all processors desired to find out about the quality of their pack and how to improve it, and what his competitors were doing. Several teachers from the Home Economics Department of the Western College of Washington and other quality experts were on the judging team. Canned oysters, "Cove" oysters, oyster stew, smoked oysters, frozen oysters and breaded oysters were cut, sampled and judged.

The "Smorgasbord" served at Blodel Donovan Park was enjoyed by all but the banquet, as usual, was the big event.

One unpublished speech was made at the convention which I remember well and believe is worthy of note. It was made by Vinton W. Bacon, public relations man for the pulp mills. His subject was "Pollution Control by Pulp and Paper Mills of Oregon and Washington". This was of particular interest because it was made almost in sight of one of the largest pulp mills in the world. We were convention guests of the mill. Mechanically it is marvellous—except for one thing. No provision has been made to take care of their sulphite liquor. They have appropriated the use of the waters of Northern Puget Sound as a sewer without regard to destruction of natural resources, such as fish, oysters, crabs and clams. Of course, as we went through the plant we were advised, in answer to questions by the curious, that they were making alcohol by removal of any quality that might be objectionable, as well as other by-products. But they failed to state that the part so used was *but a small Per cent of the whole*, and that the process of removal left in the water much that was deleterious to sea life. It was also apparent to us that there were no living barnacles or mussels attached to the piling under the dock or in the vicinity of the mill. They did not tell us or show us the great outlet pipe, recently enlarged, almost large enough for a man to stand in, where over forty million gallons of water filled with black, poisonous sulphite liquor was daily poured into the Bay. Forty million gallons per day is a tremendous amount, over eight times as much as is used by the City of Olympia. So I say even Mr. Bacon, who is a top quality public relations man, had nerve to speak to a convention of oyster growers at that particular time and place.

Mr. Bacon assured us of his friendship. He was glad to have an opportunity to tell us that, since a finger of suspicion had been pointed at the sulphite waste liquor as a reason for damage to our oyster beds, the mills in Oregon and Washington were willing to co-operate with us in investigating the matter. He treated it as a matter of concession and friendly relations on the part of the pulp mills, and as a new subject needing long and expensive scientific study. He evidently had not read the reports of the many state and federal biologists who have studied it for over thirty years on this Coast, as well as in the State of Maine and other states, and in England and other countries where fish and other sea life has been greatly damaged, even to the point of extermination.

But another convention speaker, Milo Moore, Director of Fisheries, was still to address us. Milo's speech was a masterpiece. In his slow, deliberate way he answered Mr. Bacon. He said he had listened to his talk with

amazement, that when he had left the Department of Fisheries eight years before he had tangled with these pulp mills for a long time, and warned them that unless they corrected their practice of using our waters as a free sewer to take care of sulphite liquor they would destroy all our sea life. He said they had given him the same cooperative conversation that Mr. Bacon had used. Yet when he returned they had done nothing and were still treating it as a new subject requiring time and study. He then related conditions as they now exist in the vicinity of sulphite pulp mills, the depleted fishing grounds, the depleted oyster and clam grounds.

During the convention, officers and Trustees were elected. The older men were now disqualified because of service for two consecutive terms. The following were elected: Min. G. Gardner of Crescent Beach, B. C.; Chester Wachsmuth of Portland, Oregon; Richard Hicks of Olympia; David C. McMillan of Shelton, Washington; Earl P. Morgan of Anacortes, Washington; and Nat Waldrip of Shelton. Lee Wiegardt was again elected President, and Edward J. Gruble was re-elected Vice-President. Charles R. Pollock was again made Secretary-Treasurer. No General Manager was chosen to succeed Malcolm Edwards, resigned. This was the twentieth anniversary of Charley Pollock's services as Secretary-Treasurer for Pacific Coast Oyster Growers Association.

The importation of canned oysters from Japan continued to be a problem. On June 10, 1957, the Coast Oyster Company wrote a letter to David Wallace, Director, Oyster Institute of North America, which I quote:

"Mr. David Wallace, Director  
Oyster Institute of North America  
6 Mayo Avenue, Bay Ridge  
Annapolis, Maryland

Dear Mr. Wallace:

While in the East this spring, you may recall we discussed the sanitary conditions of the oyster industry in Japan. I now wish to convey to you my considered thoughts on the matter.

I have visited most oyster areas in Japan at one time or another in the past two and one-half years. I have observed the same oyster opening houses produce oysters for both home consumption and the export market. I do not believe I need to say more than point out the fact that these operations could never pass the U. S. Health Department regulations, because of building construction and the possibility of typhoid.

On the other hand, almost all oysters sold for the half-shell trade are specially treated in fine, modern buildings with the most up-to-date equipment. Oysters from these plants are reported to be free from harmful bacteria. I am told the reason for such modern facilities is that the Japanese themselves have no desire to eat raw oysters if there is a chance of contracting typhoid. After observing these plants, I know the standards of Japanese shucking houses can be raised.

Mr. Wallace, I am at a loss to understand why the U. S. Health Department has three rules governing the sanitation of oysters and oyster products. (1) In America the rules and standards governing oysters are virtually the same as those governing fresh and canned milk and are enforced very rigidly. (2) The importation of oysters from Canada must meet all U. S. standards which, of course, include the cleanliness of the water in which they are grown. (3) At the present time canned oyster products from Japan do not meet U. S. Health Department standards. WHY?

I, for one, am not interested in trying to prevent the Japanese from exporting oyster products to the United States as long as they meet the standards set up by the U. S. Health Department governing all other oysters



consumed by the American public.

Dr. D. B. Quayle, who is head of our biological research department, recently visited Japan and his observations on the oyster industry there corroborate my own conclusions.

Very truly yours,

COAST OYSTER COMPANY  
President

It has become quite apparent that under our trade agreement with Japan the rapid increase in their export to this country cannot be prevented. However, the viewpoint set out in this letter has been adopted by the oyster industry both on the East Coast and the West Coast.

Still another matter has arisen which applies to labeling the container. On the theory that their oysters are also grown in the Pacific Ocean they now label them "Pacific Oysters". The requirement that the label show where they are packed, this is printed in very small letters. The unsuspecting housewife, unless she looks very closely, will buy with the belief she is getting a can of Pacific oysters packed in this country. A move is now on foot to require them to correct it.

The seed situation in Japan which had caused the resignation of our Director and seed inspector, Malcolm Edwards, continued to exist. A heavy set of seed had taken place both in Willapa Bay and also in Quilcene and Dabob Bay, Hood Canal.

The Trustees felt that it would work its way out. They did not send a man to Japan in the fall of 1957, but in cooperation with the Japanese growers, their representative, Mr. Nagaike of Japan, was sent over here. He stood firm on price, however, due to the agreement made in Japan which consolidated all the principal seed growing companies as to price, which was \$7.00 per case for broken seed and \$6.50 for unbroken. Our contract was at that price. In the spring of 1958 we received 25,675 cases of seed from them.

I predict that as the standard of living in Japan rises to a higher level and employment and wages increase seed will rapidly go up in price. My conclusion as to the answer will be discussed in a later chapter on "Natural Pacific Oyster Set in Washington".

The following comment on this subject in a recent Bulletin, dated December 5, 1958, published by the Oyster Institute of North America, records the following:

**"JAPANESE EXPORTERS AGREE TO LIMIT SEED OYSTER EXPORTS  
TO UNITED STATES**

According to a recent report, the Japanese Ministry of International Trade has approved an agreement among the three largest oyster seed exporters to limit exports of this product. This agreement was reached between the exporters Tokyo Shokuhin, Nozaki Sangyo, and Dianchi Bussan to prevent excessive price competition among themselves. Exports this season will be limited to 55,000 cases at U.S. \$7.00 a case for cut cultch and U.S. \$6.50 for uncut, f.o.b. Shiogama.

It is hoped that this report is considered very carefully by west coast seed buyers. While we have several groups buying seed in competition with each other in Japan, the Japanese have gotten together to establish a floor under prices and limit production to hold the price. It would appear most desirable for American buyers to eliminate

buying competition in so far as possible and try to negotiate together to obtain the best possible quality and price. Otherwise, the results will probably be the same as before. The Japanese report themselves that they sold 59,943 cases last year at the highest prices in history."

During the year an organization known as "Citizens for Clean Waters" was formed who circulated Initiative No. 203. The circulation for signatures proved to be a difficult and an expensive undertaking. The mail, radio and television were used, but the opposition, the industries which are polluting our waters, had more money to fight it so it failed to receive a sufficient number of signatures to go on the ballot.

On June 20, 1958, the Trustees elected Fred W. Wiegardt to fill the vacancy caused by the death of John L. Wiegardt. Fred was a brother of John. They had operated their oyster holdings as partners.

At the end of the fiscal year 1957-1958 the Pacific Coast Oyster Growers Association had a membership of 116. These were distributed as follows:

British Columbia -----	15
North Puget Sound, including Hood Canal -----	21
South Puget Sound, Olympia, Shelton and Gig Harbor -----	47
Grays Harbor -----	3
Willapa Harbor -----	23
Oregon Coast -----	5
California -----	<u>2</u>
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The annual meeting was held in Olympia, Washington, on August 21, 22, and 23, 1958. The Olympian Hotel was headquarters. A fine program had been arranged by Earl R. Brenner and his committee. The can cutting program was bigger and better than ever. Speakers at the General Meeting, in addition to President Wiegardt's address, were Dr. Harvey McMillan, aquaculturist; Harold E. Miller, Director of Washington State Pollution Commission; and Milo Moore, Director of Fisheries.

A program report was made by Richard W. Nelson, chemist engineer, Seattle; Technological Laboratory (on studies and freezing and storage of Pacific Oysters) ; and John Girard, advisory sanitarian, Washington Department of Health, on development of the Shellfish Sanitation Laboratory at Purdy.

The following resolution was passed:

"WHEREAS, the Shellfish Laboratory Contact Commission, through courtesy of the Shellfish Laboratory, a number of other interested oyster growers, have visited the Washington State Shellfish Laboratory at Quilicene, Washington, attended their meetings, heard their reports and observed their facilities and their experimental work; and

WHEREAS a feeling of approval has been voiced by members of the Shellfish Laboratory Committee and by other visiting oystermen, commending the work done, the methods used, the plans for carrying on future experimentation, and the expenditures made from the special funds provided by the 1957 legislature;

NOW BE IT RESOLVED by this annual meeting of the Pacific Coast Oyster Growers Association:

1. That a vote of confidence, thanks and appreciation be extended to the Shellfish Laboratory personnel for the manner in which they dedicated themselves to this work.
- 2, That this resolution be incorporated in the minutes of this meeting, and that a copy thereof be sent to said

Laboratory, and one to the Washington State Department of Fisheries.

E. N. Steele  
Chairman, Resolution Committee'

A tour to the Olympia Brewery was on the program. At 7:30 P.M. a smorgasbord dinner was enjoyed at the Olympia Golf and Country Club.

On Saturday Mrs. John M. Brenner entertained the ladies at her home. Assisting her were Mrs. Richard C. Hicks, Mrs. Robert O. Bowers, Mrs. Earl R. Brenner and Mrs. Nat a Waldrip. It was a beautiful affair enjoyed by all the ladies.

The annual banquet, always the outstanding occasion of the convention, was different this year. The guest speaker, Senator Warren G. Magnuson, was unable to be there so entertainment was furnished by a group of singers. This was followed by a dance in the jade Room.

Officers elected for the fiscal year 1958-1959 were: Edward J. Gruble, President; Earl R. Brenner, Vice-President; Charles H. Pollock, Secretary-Treasurer. Convention held in Olympia, Washington.

For the fiscal year 1959-1960, Earl R. Brenner, President; Stanley C. Gillies, Vice-President; Charles R. Pollock, Secretary-Treasurer. Convention held in Seattle.

For the fiscal year 1960-1961, Stanley C. Gillies, President; Bob O. Bowers, Vice-President, and Charles R. Pollock, Secretary-Treasurer, being 23 years of service. Convention held in Tacoma, Washington .

The three most important problems confronting the Association during these three years:

1. Seed oysters from Japan;
2. Sulphite liquor pollution from pulp mills;
3. Co-operative marketing of oysters.

The above named officers serving during these three years were all men of long experience in the oyster business, and had served for many years on committees dealing with these three problems. Several of them had been in Japan representing the Association in the purchase and shipping of oyster seed.

I will briefly review the progress made during these years on each of the above named problems.

1. Seed oysters have advanced in price and cost of shipment on unbroken Miyagi seed to \$9.25 a case. Broken Miyagi seed to 19.75 per case, and Kumamoto unbroken seed to \$13.50 per case.

Previously it has been stated herein that the early cost of seed in the 1930's was delivered F.O.B. Washington ports at \$3.50 per case, gradually increasing to the present price.

In spite of the higher cost the shipments received were as follows:

1958 -----	25,675 cases
1959-----	15 083 cases

This is in addition to shipments to British Columbia, Oregon and California made by purchases by growers other than through the Association. The total including out of state being 44,291 cases.

2. The question of pollution was still a very vital concern to oyster growers. It will be noted that the committees for over a quarter of a century have been giving much consideration to this subject. At the convention held in Olympia the discussion was very insistent. This was probably due to the fact that in June of 1957, the Shelton Pulp Mill had closed and since that date there was a very heavy set of seed in southern Puget Sound and especially in Oyster Bay. This seed survived and all oysters, both Olympia and Pacific, had fattened and were normal in growth. The Daily Olympian, on August 25, 1958, published the following article:

"SHUTDOWN OF PULP MILL SEEN AS CAUSE OF OYSTER REVIVAL"

"Oystermen of the Pacific Northwest noted the biggest seed catch of Olympia oysters in thirty years following the shutdown of the Shelton pulp mill in June of 1957. This was among the top items studied and discussed by the more than 150 oyster growers and processors in Olympia over the week end for the annual convention and business meeting of the Pacific Coast Oysters Growers' Association.

"In a resolution by the group it was stated that the almost extinct Olympia Oyster Industry has been revived by the biggest seed catch in thirty years and that Pacific oysters in the area near the Shelton pulp mill are growing twice as fast and fatten to prime condition. This is in contrast to their watery and emaciated condition prior to the pulp mill shutdown, Bob O. Bower, chairman of the association's pollution committee, explained.

"Bower also said that fishermen have commented that herring are again spawning in the vicinity of Shelton-for the first time in many years. Oyster grower Lawrence Gosser reported to the convention that small shrimp are back'The first time I have seen them since I was a boy.' That was thirty years ago, Gosser adds. The pulp mill was built in 1927. All this adds up to proof of the large scale-damage to marine life from sulphite liquor, Bower said. Samples were taken near the Shelton mill before the shutdown and are continuing in an automatic device that checks every hour.

"Another strongly-worded resolution pointed to the failure of certain pulp mills in this state that have failed to install a process of eliminating pollution in state waters. As a result of continued pollution from certain industries, the oysterman said the state has two choices

(a) Declare the adversely affected industries, (oysters, for example) expendable and admit that the sulphite mills are a special privilege group above the law, or

(b) Enforce the orders in the temporary permits as provided in the 1945 Pollution Act and bring the force of public opinion on the side of equal treatment for all under the law."

From that time on the pressure of the oyster growers became very insistent, urging the state pollution board to take some action. During these three years, greater progress was made in this field than in any equal period of time heretofore. This subject is of such vital importance now, and has been, that the subject will be treated more fully in a later chapter.

3. The oyster business has been, from the beginning, very competitive. At different times during the last thirty years, the formation of a co-operative group has been given careful consideration. During each of those attempts to form such an organization, practically the entire group of producers agreed in principle, but when they got

down to discussion of details differences arose concerning name, methods of delivery, place for the central office, the trade mark to be used, the person who should head-up the organization and other questions, so the effort was temporarily abandoned.

Finally the Haines Oyster Company (an oysterman's co-operative) was organized about 1953. W. Arnold Waring, who had been conducting a sales organization in Seattle for many years was selected as general manager. He had severed all connection with any growing operation. A building on the waterfront in Seattle was rented and equipped for the repacking of oysters. A co-operative specialized lawyer was employed, and an accountant who handled the accounts of many co-operatives secured. Markets were contacted, most of which were entirely separated from the previous territory supplied with oysters. The securing of markets was very successful and the operation proved a success but for one thing.. Some of those growers who did not join soon invaded the sales territory and offered oysters below co-operative prices. Many of those who had previously indicated their interest in the Co-op failed to join and the quantity of oysters supplied by its members was not sufficient to supply the market. The cost of operation, considering the volume of oysters supplied, was so high, and the price competition so keen that it failed to accomplish the principal purpose for which it was formed, to wit: the stabilization of prices on a level that would enable the growers to realize a profit on their product. Prices of all commodities used in the growing and marketing of oysters had advanced but the price of oysters was even less than in years before.

On March 30, 1960, the trustees of P.C.O.G.A. directed the secretary to send out to the Pacific oyster industry a statement which read as follows:

"TO-THE PACIFIC OYSTER INDUSTRY

"On November 19, 1959, the Board of Trustees of the Pacific Coast Oyster Growers Association instructed the secretary's office to send out a questionnaire as follows:

"QUESTIONNAIRE:

Do you favor?

1. Establishment of a producers co-operative outside the corporate structure of the Association?  
\* 70 Yes    12 No
2. Said co-operative to sell producers fresh and frozen oysters through a competent sales agency with policy controls in the hands of co-operative's directorship?  
\* 65 Yes    15 No
3. Said co-operative to sell all shell stock and bulk oysters of co-operative's membership  
\* 54 Yes    23 No

"For your information, it is advised that not all of the members of the Industry sent in their answers. \*However, above you will note the number of answers received on same.

At the last meeting of the Board of Trustees of the Pacific Coast Oyster Growers Association, the secretary's office was instructed to forward to you the above information.

Very truly yours,  
PACIFIC COAST OYSTER GROWERS ASSOCIATION  
By Chas. R. Pollock, Secretary"

Resulting from this a committee was appointed to make an investigation and report their findings to the association. In the report which was entitled "Specific Proposals to End the Disunity and Disastrous Competition in Oyster Sales" the following statement was made, together with other favorable comment. "Cost of seed, wages and packaging have increased over 30 % in the past ten years while bulk oyster prices have decreased from \$3.25 to \$2.75 per gallon; with

a further 25 cent reduction expected". R. H. Bailey was chairman of the committee.

This was followed by meetings which resulted in negotiations to revise the by-laws of the Haines Oyster Co. (a co-operative) in various respects by reason of which a large number of growers joined said corporation (Haines Oyster Co.) and signed marketing agreements. This amounted to the pledging of approximately 300,000 gallons of oysters per year. In early October, 1960, the Haines Oyster Co. (a Co-op) established new prices which consisted of 50 cents per gallon advance in price. Hopes are again revived that this move will constitute one of the greatest advances in uniting the oyster growers.

During this three year period several deaths occurred among the oyster growers. In the program of the Association meeting in Olympia the following memoriam appears:

#### IN MEMORIAM

F. W. MATHIAS, former president and member of the Board, Olympia, Washington

E. S. DAVIS, Member, Grass Creek Oyster Company, Hoquiam, Washington

MOSS YAMASHITA, Western Oyster Company, Purdy, Washington

H. A. ESPY, Oysterville, Washington.

The program was also dedicated to F. W. (Mat) Mathias, a copy of said dedication appears later. Mat had been an enthusiastic worker in the Association as well as in other fields. On October 18 the P.C.O.G.A. also published the following statement:

"MOUNT MATHIAS-Our good friend F. W. (Matt) Mathias, who gave so generously of his time and talents to the work of our Association over many years is having his efforts in boosting the State of Washington permanently established and perpetuated through the naming of 7,168 foot peak in the Olympics in his honor by the Board of Geographic Names of the U. S. Department of the Interior."

The history of the Pacific oyster would be incomplete without recording the death of Fred A. Gries of San Francisco on March 10, 1958. Fred had been a member of the association for many years. He was also a trustee and represented the Pacific growers of California.

This concludes the historic part of the Pacific oysters up to the present date.

The growth of the industry has been phenomenal. The outlook for control of sulphite liquor and the result of the efforts of the co-operative marketing operation look very encouraging.

Prediction is that Pacific oysters may become as popular and its markets as extensive as those of the Eastern oyster.

## CHAPTER XII REPRODUCTION OF PACIFIC OYSTERS (OSTREA GIGAS) IN THE STATE OF WASHINGTON

The success or failure of an oyster industry is the same in one respect as any upland crop. It is entirely dependent upon being able to secure good seed at a reasonable price. This was obvious to me at the time the tide flats, called oyster beds, were purchased and planted as a new venture. It was not only a different specie than the native oyster (*Ostrea Lurida*) but was dependent upon securing its seed supply from a foreign country some six thousand miles away. I had been a grower of Olympia oysters for some fifteen years, during which time an abundant supply of seed caught naturally on my Olympia oyster beds. Therefore, I took this well considered risk.

It is obvious to any reader of this book that seed oysters have been probably the most important problem that has confronted the industry throughout its history. It still is, and in my opinion, will continue to be for some time.

My first consideration of this subject was in collaboration with my old friend, Dr. Trevor Kincaid, then instructor in biology for the Washington State University. He had been in Japan, knew the Japanese people, had observed their oyster culture and was satisfied they would fulfill their part. We both knew J. Emy Tsukimoto from whom we were purchasing the beds and his first planting of seed thereon, as I have earlier stated. He was to go to Japan and personally look after seed production and shipments. The principal risk seemed to be that the supply might some time be cut off by war, which at that time seemed very remote.

Two things were discussed which offset to some extent the risk we were taking:

First, at that time on the East Coast the oyster biologists were meeting with some success in artificial production of seed in a laboratory.

Second, the conditions in Japan were so near the same as in Puget Sound that the oysters would soon become acclimated and would spawn and set naturally here.

The decision was made and as previously stated, Dr. Kincaid spent two summers at the Rock Point Oyster Company beds. A small laboratory was installed. He worked hard to get the embryo oysters to set. With each failure he would "pull a new trick from his bag" as he expressed it. He did not succeed in producing an artificial set, and to my knowledge it has never to this day been done to the extent that it was commercially practical.

But his second prediction has partially been true. In certain areas Pacific oysters have reproduced. The natural set of seed has not replaced the seed from Japan but it has helped out, and I have hopes that I may live to see the day when the Pacific oyster growers may not be reliant entirely upon Japan for seed. Or, better yet, that we may produce sufficient seed that we may be entirely self-reliant. There have been many problems to solve; years of study and experimental work by biologists and oyster growers have been devoted to them; considerable money has been used to carry on.

In this chapter I shall try to give a picture of the advancement of this effort to solve the seed problem.

For the first eight years no further attention was given to natural seed setting. The Rock Point Oyster Company was during those years the only importer of seed. It was obvious from the two years observation by Dr. Kincaid that conditions were not suitable in Samish Bay. The oysters, spawned but did not set.

In the year 1930 one Gerald T. Mogan became interested in oyster land both in Dabob Bay and Quilcene Bay, both tributaries of Hood Canal, itself an arm of Puget Sound. For experimental purposes in April, 1930, he

planted three cases of seed oysters in Dabob Bay and one case in Quilcene Bay. His thoughts, so he told me, were to find out how Pacific oysters matured in that area for commercial purposes. Native oysters had grown there and a few were still found on the tide flats. Sometimes the unexpected happens. The oysters did not grow as rapidly as hoped, so he did not pay further attention to them. About two years after this I received word that oyster seed had been found on the rocks along the shore for several miles south of where the seed had been planted. Dr. Kincaid was asked to make an investigation. He did so, and found to his amazement that the very thing he had been working for scientifically for years had happened naturally, but had been discovered accidentally. While experimenting to find land suitable for growing marketable oysters, Mr. Mogan had found an area where conditions were such that the oysters not only spawned but the embryo swimming larvae lived and attached themselves to rocks, shells, or whatever type of cultch they came in contact with. Analyzing the phenomenon it was found that the rocks which cover the beaches for many miles became warm when the tide was out and warmed the water on the in-coming tide. Water temperature has much to do with seed setting. The waters of Samish Bay where Dr. Kincaid experimented were several degrees colder than in Quilcene and Dabob Bay. From this it was assumed that other conditions such as salinity of the water and mineral content were suitable for the natural set of seed of Pacific oysters in Dabob and Quilcene Bay.

Oyster growers became alive with interest. In 1934 another set took place. Another in 1935. By that time the earlier sets had grown to a size that pictures could be taken of them. Mr. H. C. Braley, of Aberdeen, decided to carry on his own experiments. He constructed a raft or float out of logs and suspended 1200 Hopkins type collectors. This type of "seed collector", and a cardboard egg case filler dipped in cement, had recently been invented by Biologist Dr. Hopkins, and had been used very successfully by the Olympia oyster growers. He received a heavy set, each collector showing an average of about 500 oysters.

Interest was further spurred on by publicity. On January 24, 1936, the South Bend journal published a comprehensive story illustrated by pictures showing the set of seed on one of the collectors, shells with many seed attached, rocks with one, two and three year old oysters attached, and pieces of bark with seed attached.

The Pacific Fisherman, published in Seattle, Washington, gave the subject attention in two different issues that year. It predicted that within a few years it would be unnecessary to import seed from Japan. It stated that it would be necessary only to determine a few facts about spawning and setting of this species in order to lay the foundation for commercial seed setting.

The other article covered the subject from the standpoint of the great savings that could be made by the oyster growers. It was computed, using the average cost per case for Japanese seed at \$3.50 per case, that at least \$1.00 per case could be saved. It stated that some seed setting was taking place in Willapa Bay, but the clarity of the Quilcene water rendered the Quilcene and Dabob areas superior for the catching of Pacific oyster seed.

By this time governmental agencies were taking an interest. Dr. A. E. Hopkins, aquatic biologist of the U. S. Bureau of Fisheries, did much in the interests of this new seed setting venture. In the above mentioned article he is pictured standing in the midst of a bed of natural set of two year old oysters. Unfortunately he was transferred to another assignment. But the State Department of Fisheries placed one of its biologists, Milner B. Schaefer, in charge of this work.

I had been watching these things from the beginning with great interest. I was at that time President of the Pacific Coast Oyster Growers Association. August 1st, 1938, I organized a non-profit corporation to carry on the seed setting program in Quilcene Bay. Twelve prominent oyster growers contributed to this venture. Among these, beside the Rock Point Oyster Company, were J. J. Brenner Oyster Company and the Olympia Oyster Company, both of Olympia; Wiegardt Brothers Co., partners, of Ocean Park; Matt Mathias and F. W. Loomis of Grays Harbor; The Camano Blue Point Oyster Co., Inc.



The primary purpose was, if successful, to supply our own beds with natural set seed, and to give others the opportunity to do the same. We leased, with option to buy, a tract of what we considered to be the best tide land for this purpose. I accepted the position of manager. We constructed off-shore racks, strung shells and placed them over the racks. We prepared and used Hopkins type collectors suspended from log floats. We employed an experienced Japanese man to look after it. This was carried on for some years with success so far as catching seed was concerned. We also learned a great deal from experience. One thing I well remember is that Quilcene Bay is subject to some terrific storms, one of which destroyed our floats and collector seed and damaged our racks. For causes unnecessary to relate here the entire enterprise was discontinued.

The experience of Mr. Braley above referred to was similar to our own. After the set had taken place as shown in the picture, a storm tore his floats apart and he lost his seed. He became discouraged and did not try again. Biologist Milner B. Schaefer, following the departure of Dr. Hopkins, did a fine job in his studies on the factors connected with reproduction of the Pacific oyster. He studied what temperatures were necessary to cause the oyster to spawn and larval development; he made hydrographical observations; salinity studies; periodicity of spawning; periodicity and manner of setting and rate of setting; in fact he reduced to scientific findings the things which up to that time the oystermen had to guess at from watching the activities of the oyster. These findings he charted and graphed for the year 1936. In December, 1938, the complete report was published by the Washington Department of Fisheries, Biological Report No. 36E, B. M. Brennen, Director of Fisheries. His summary is of sufficient importance that I shall quote from it.

### "SUMMARY

The Japanese oyster industry has shown a remarkably rapid growth in the State of Washington in recent years. This industry consists, essentially, of the growing of marketable oysters from seed oysters imported from Japan. The oysters are used both fresh and canned, the latter phase of the industry being potentially of very great importance.

It would be of great value to the industry to have a potential supply of domestic seed oysters in case the foreign supply should be cut off, or the price rise to such an extent that the importation of seeds should become unprofitable. The limited propagation of Japanese oysters in a few localities in the State has indicated that such a seed supply might be developed. Studies were, therefore, instituted in 1936, on the reproduction of the Japanese oyster in Quilcene Bay on Hood Canal, a locality which gives promise of having a more or less regular spat fall. Because of lack of funds, the investigations were terminated after one season. In anticipation of future study, however, it is deemed worthwhile to present some of the results of the first season's work in this paper.

The preliminary nature of the results so far obtained and of the conclusions drawn therefrom cannot be too strongly emphasized.

Hydrographical observations taken included records of temperature, salinity, and hydrogen-ion concentration. The mean bottom temperature varies from about 5.5' C. in winter to 17.5' C. in summer. Salinity is lowest in the late winter when the run-off of the rivers is greatest, and highest in the late summer when the run-off is least. During the summer months, the water is stratified, marked decreases in temperature and increases in salinity being found from the surface down. The water is less stratified during the winter months and the coldest water is found near the surface. Surface temperatures and salinities are quite nearly uniform over the entire area during the summer months. Little variation was found in pH, but it tends to be higher at the surface than in the deeper water, and lower in winter than in summer.

Spawning was studied by examination of gonads of samples of oysters opened periodically during the season, and from the occurrence of larvae in the plankton hauls. In 1936, spawning commenced sometime before July 1, and continued until the middle of September, although the principal spawning took place between July 28 and

August 12. The occurrence of young larvae in the plankton was found to be a better means of determining the incidence of spawning than gonad examination. A number of modes of the spawning were observed, but these were not correlated with the tidal period and were not shown to be related to changes in hydrographical factors.

Spawning took place at temperatures considerably lower than those recorded by previous workers as critical temperatures for the spawning of *Ostrea Gigas*. Further study is needed to determine the critical temperature and its relations to other stimuli which may cause the spawning reaction.

The rate of larval development was studied by means of the occurrence of size frequencies in the plankton collections. The rate of development is apparently related to the water temperature, being slowest at the lower temperatures. The most rapid rate of development was during August, when the period from spawning to development of mature larvae was in the neighborhood of three to four weeks. Larvae resulting from spawnings later in the season developed at a slower rate, and the great majority of these larvae perished before setting size was reached. All larvae disappeared from the water after October 12. The disappearance seems to be a result of the low water temperatures, below the minimum for larval development.

Time of setting and rate of setting throughout the season were studied by means of bags of cultch placed on the bottom at several localities periodically throughout the season. Larvae were found to set at a size of about 270 U in height. Setting commenced in the early part of July and continued until the first part of October, although most setting occurred during August. Large variations in amount of setting at different places in Quilcene and Dabob Bays were recorded, but it was not possible to assign definite reasons for this.

The setting process was found to be correlated with the lunar tidal period. Setting is most intense during neap tide periods, least intense during spring tides. This periodicity is not due to periodic variations in temperature, salinity, pH, or rate of spawning.

Studies with glass plates and concrete-coated cardboard spat collectors showed that the number of larvae attaching is a function of the angle of surface of attachment. The largest number of larvae attach themselves to under horizontal surfaces; the number becomes less as the angle with the under horizontal becomes greater, the minimum set taking place on upper horizontal surfaces. This behavior is similar to that found by Hopkins (1935) for *O. lurida* larvae, but is specifically different in that a greater proportion of *O. Gigas* larvae attach themselves to surfaces of greater angle."

Biologists Wilbur McLeod Chapman and George Esvelt continued this work in 1942 and the results of their work was published in July, 1943, by the Washington Department of Fisheries as Biological Report No. 43A.

This study included Willapa Bay and Willapa Harbor.

During the years but one set (in 1936) had taken place in Oyster Bay, an area of Puget Sound, and a small set in a few other spots, but sets of much importance and more or less consistency had taken place in Willapa Harbor and Willapa Bay, which being really one area, I shall refer to as Willapa Bay. Therefore the biologists concentrated their studies to Hood Canal, particularly the inlets Dabob Bay and Quilcene Bay, and Willapa Bay area in the southern part of the state. The work done in 1942 was, because of lack of funds, largely devoted to the Willapa Bay area. They did make some comment on the advantages and disadvantages of each area. It is not my purpose to pass judgment as to which one is preferable for seed producing, but to set out the facts as they have been pointed out by the biologist. I believe most oyster growers agree with the facts so found. It will require a full measure of successful development of both areas to accomplish the end which I will later summarize.

Willapa Bay is about twenty-five miles long and from two to six miles wide. Although it is cut up by channels from the rivers and sloughs, yet when the Bay goes dry on low tide more than half of it is uncovered. Many

thousands of acres of tide land, suitable for the cultivation of oysters, is exposed.

Six rivers of various sizes flow into the Bay, thus furnishing fresh water to lessen the salinity of the ocean water.

During the summer of 1930 a light scattering set of seed was discovered and in 1936 a very heavy set took place. The oyster growers were not prepared for it. They had not put out special cultch that could be moved and transplanted on vacant beds known as growing ground. The seed caught mostly on the shell of live oysters and could not be used to advantage without destroying the marketable oysters. In 1941 there had been a commercial set, but the set in 1942 covered by the biological report I have referred to, was the first that was taken advantage of in a commercial way. In fact most of the oyster growers, due to the harmful results of seed which caught on their growing oysters, preferred that no set take place. Seed from Japan was still reasonable in price. They could harvest oysters from their growing ground in the winter and plant it in the spring with good quality seed of uniform size and age from Japan. Plantings had been increased to about 60,000 cases of seed per year. But all at once something happened. Pearl Harbor and war with Japan. Seed shipments were immediately cut off. The importance of natural set immediately became apparent. During the year 1942 and for the next succeeding four years, till the war was ended and commercial relations renewed, every effort was used to prepare for and use the seed. The biologists were of much importance as they worked with the oyster growers. The emergency was met, and the Pacific oyster industry was not only kept alive by natural set seed, but was enabled to assist the war effort by supplying great quantities of oysters to feed our people and our soldiers.

This was true also in Hood Canal. By way of comment they also had a good set. The Hamma Hamma flats, a large gravel covered bar south of Quilcene, was covered with one, two and three year old seed. The Rock Point Oyster Company purchased these and moved them on scows to their beds in Samish Bay. Dabob Bay was well covered with thousands of bushels of the same kind of seed. We bought that and moved it to Samish Bay. We bought a large tract in Dabob Bay and leased other beaches in that locality. We prepared off-shore trestles, strung oyster shells and hung them on the trestles, thus following the methods that had proved most efficient in Japan. Thus we supplied our beds and kept up our production during the war.

But to return to the biologists' report for the year 1942. They followed to some extent the experimental work that was made by Mr. Schaefer in Hood Canal. They studied spawning and setting habits in many parts of the Bay; water salinity; temperature of the water; the relation of temperature and salinity to spawning, larval development, and setting; type of cultch suitable for catching Pacific oyster seed; and the best time to remove the seed from the racks to the growing ground. The report is accompanied by complete data on these subjects and has been of much use to oyster growers.

As to their work on Hood Canal, they found that during the years natural set had extended further and further south along the shores of Hood Canal as far as Hoodspout, and in the northern half they were abundant wherever there was a shallow cove or alluvial fan from a stream. Much of it was of no use as it had caught on rocks, but it proved that if proper preparations were used the set could be caught on cultch that could be moved to growing beds. In the year 1941 there had been a very heavy set, and as I have said, much of it was used during the war.

As to advantages and disadvantages of this area, the following are mentioned:

in Hood Canal the clearness of the water has its advantages. To quote: "The water is so free from sediment and plant growth that the cultch stays clean and retains its spat catching efficiency for a period of months, quite in contrast with the few days in other localities. Cultch that was put out in Quilcene Bay in the first week of July was found to be dean and catching spat in the last week of August.... It is quite customary for sets of commercial size to occur on the clean gravel of the beach, and during 1942 a considerable quantity of this gravel, with its seed attached, was sold from Dabob Bay for transplantation to oyster beds as far away as Grays Harbor."

"Cultch placed in the water early in June stayed so clean throughout July and August that its catching efficiency was little impaired. As a result spat kept setting at a slow rate, but constantly, for two months. . . . This was very evident upon the examination of the cultch late in August when spat could be found all the way from a quarter of an inch in diameter down to those which had just set a day or two before on the same shell."

They noted that the seed at Dabob Bay, in fact all seed caught in Hood Canal, grew very slowly and was only suitable for moving after it had seasoned during the winter. Harvesting of oysters being done here during the winter, the beds were ready for planting the following spring. This had been the custom when using seed from Japan for many years. The seed was hardened during the winter and received and planted the following spring. Therefore this condition made the Hood Canal seed suitable for commercial use.

To quote: "The catch comes late in the summer and the seed grows so slowly that it can be held on the catching racks over the winter and be small enough to be safely transported in the early spring. This is an important point, because most of the oyster harvesting is done over the winter and in the spring the oysterman not only has his beds clean for the reception of new seed, but his crew is then not otherwise occupied.

One difficulty facing the Hood Canal seed grower I have already mentioned; that is the storms. To quote: "Catching grounds in Quilcene and Dabob Bay, face southward and are without any, or with very little protection from storms during the winter months, which are normally from the south. Many discouraging experiences have resulted from racks being washed out or knocked down by driftwood during the storms. There are certain spots, however, which have better shelter."

One advantage the Willapa Bay seed had was that, at least at that time, the largest part of the industry was concentrated at Willapa Bay and there seemed the greatest likelihood of obtaining a set of commercial size there. The Bay is so large and so many different locations where conditions differ that every year there may be a set some place in Willapa Bay, and no matter how heavy the set, the beds are so extensive that the seed can be used in that Bay.

The report pointed out two or three things that caused difficulty. One was that there exists a muddy condition which would, when cultch was put out, silt over it to the extent that oysters would not attach after a few days. To quote: "The settling of sediment and the growth of algae on the cultch, the latter loses the best of its catching efficiency in three or four days, and after a week or ten days is apt to be so dirty as to be worthless for catching spat."

Their recommendations were to continue biological studies so that the time of setting could be accurately determined and the oyster growers told when to put out their cultch.

Another point noted was that the seed, when caught, grew very rapidly. They recommended that the seed be planted the same fall. That has been done when there was open ground ready for planting. Recently I have observed that it is being met in a different way. A suitable location is found on a protected beach at a tide level that only covers a few hours a day. If the nature of the beach is soft it is hardened by covering with broken shell so that it is firm and level. The seed is then placed on the prepared ground and left till spring. The growth is retarded and the shells of the tiny seeds hardened. In the spring it is transplanted to the growing ground in deeper water.

Since these biological reports were made, biologists furnished by the Washington Department of Fisheries have continued this type of work. It is not so much my purpose to set out in detail their findings as to set out the nature of the problems to be solved and the advance that has been made toward fulfilling the predictions of Dr. Kincaid and others in the early history of the industry, to wit, to make the Pacific oyster industry independent for its seed supply.

I have already shown how natural set of seed kept the industry in production during the war with Japan. It is to be hoped that another World War may not come, but it may. But though it does not its development is still of great importance. As I have stated, some difficulties have arisen with the seed producers in Japan. They, naturally, have desired a higher price. As the standard of living is raised, wages, which have been very low, will increase. The Japanese Government is now showing an interest and may lend a hand in increasing the price of seed. Transportation costs continue to increase. The cost of the seed by the time it is planted on our beds, is now \$10.00 to \$12.00 per case. The price in Japan is now around \$7.00 per case. Before the war the price was \$3.50 to \$4.50 per case, delivered here. I shall show in a later chapter the amount of money paid for seed and the price per case each year. Without first computing I estimate it at close to eight million dollars total for the thirty-five year period, an average of over a quarter million dollars per year. Should seed increase to fifteen or twenty dollars per case, as it may, the cost would be about \$1,600,000 per year. But, however that may be, if our natural set supplied half of it, oyster growers and seed growers would profit by that amount. In other words the money would be used in this country, a big percentage of which would go to labor.

Another advantage which natural set seed gives us is that both in Willapa Bay and on Hood Canal the State of Washington has vast oyster reserves. In Willapa Bay great quantities of seed has set on these reserves and been sold to the growers, thus supplying funds to use for laboratories and biologist work. On Hood Canal parts of the reserve have been set aside for the use of the people. These are re-stocked with oysters from other reserves when needed. A limit is placed on the number of oysters that may be taken per person, the same is true of ocean clams. This has been an appeal to tourists as well as our own people.

The concluding words on this subject are very optimistic. We have gone a long way. New and improved methods and equipment are being found to gather the data more efficiently and faster. For instance, Biologist Ronald E. Westley, working out of the new laboratory of the State Fisheries Department near Quilcene, has worked out a multiple depth plankton sampler. It is fastened to a power boat, put in position when located at the point from which it is desired to take samples, and while in motion plankton samples are taken automatically from three different depths of water. Previously the samples had to be taken by hand from each depth.

It is with confidence that I predict, based on my own observations and the facts herein set out, that within a few years commercial seed producing will become a business, the problems will be worked out by the joint efforts of the oystermen and the scientists. A large part of the seed used by growers in Puget Sound will be supplied by the nearby Hood Canal area and the Willapa Bay growers by their own natural set.

In support of this I am copying the official findings of the biologists for each area.

**TABLE I**

**RELATIVE MAGNITUDE OF PACIFIC OYSTER CATCH IN HOOD CANAL  
1936 to 1944**

(Taken from Washington State Reports)

Year	Commercial			
	None	or Fair	Good	Excellent
1936.....				X
1937.....	X			
1938.....			X	
1939.....			X	
1940.....			X	
1941.....				X
1942.....			X	

Year            None    or Fair            Good    Excellent  
 1943..... X  
 1944..... X

**Summary of Pacific Oyster Spawning, Larval Development,  
 and Setting in Dabob Bay, 1945-1958**

**TABLE 11**

A	B	C	D	E	F	G	H
Year	Spawning	Greatest No. Of early(SH) per 20 gal	Greatest No. Of advanced Per 20 gal	Beach Set From each Spawning	Total for Season	Floating Culch From each Spawning	Total for Season
1945	I	28	0	--	1	--	--
	II	1,006	12		1		
1946	I	446	98	210			
	II	610		14	224		300*
1947	I	8	40	6.6			
	II	11,475	119	2.9			
	III	890	28	1.0	12	12.5	43.7
1948	I	22	18				
	II	560	9				6*
1949	I	76	0			6.5	
	II	3,472	0				6*
1950	I	76	0			6.5	
	II	918	3			4.4	15.4
1951	I	1,384	142	3		7	
	II	116	0	6		3	
	III	883	0	0	3.6	0	10.6
1952	I	661	48	30		88	
	II	1,036	40	10	40	39	127
1953	I	3	1	4		26	
	II	398	1	1	5	6	31
1954							2.7
1955							.1
1956							250
1957							2
1958							405

\*Minimum estimate based on setting in Quilcene Bay or on Dabob Beach set. ..Data not available.

Setting intensity is in spat per shell taken from experimental cultch in the Broadspit area. Larval numbers are expressed as Larvae per 20 gallon sample.

Several interesting points are noted in looking at Table 1. Examination of column H, the seasons' total set on

floating cultch, reveals that in all years but 1948 and 1949 the intensity of setting was above 10 spat per shell (arbitrarily considered commercial). In 1948 and 1949 the figures given are minimum estimates based on another bay. For this reason we can safely say that in the past eight years floating cultch in Dabob Bay received a commercial set during six, and possibly all eight years. Thus the probability of receiving future commercial sets in Dabob Bay on floating cultch ranges from 75 to 100 % certain.

**TABLE III**  
**SETTING OF PACIFIC OYSTERS IN WILLAPA BAY**

Year	None	Commercial	Good	Excellent
1936.....				X
1937.....		X	X	X
1938.....			X	
1939.....			X	
1940.....			X	
1941.....				X
1942.....				X
1943.....	X			
1944.....	X			
1945.....	X			
1946.....	X			
1947.....				X
1948.....			X	
1949.....	X			
1950.....			X	
1951.....		X		
1952.....	X			
1953.....			X	
1954.....			X	
1955.....	X			
1956.....				X
1957.....				X
1958.....				X

Note: 10 oyster seed per shell considered commercial set.

**TABLE IV**  
**WILLAPA BAY PACIFIC OYSTER CULTCH SURVEY**  
**FOR THE YEARS 1955, 1956, 1957**  
Washington Department of Fisheries  
Claude S. Sayce, Fisheries Biologist

The importance of cultching for local Pacific oyster seed has increased during the past few years due to rising costs of imported seed and increased costs of operations within the Pacific oyster industry. The cost of shellstring cultch was based upon 40 cents per string and included bedding out the strings on growing ground after the spatfall. The cost of loose shell cultch was based upon five cents per bushel and since loose shell is not usually transferred to other ground after spatfall, this transfer cost was not included.

	<b>1955</b>	<b>1956</b>	<b>1957</b>
<b>CULCH MATERIAL</b>			
Shellstrings		119,500	69,208
Loose shell (bu.)	16,000	368,450	412,893
Boxes		1,400	
<b>COST</b>			
Shellstrings		\$ 47,820.00	\$ 27,683.20
Loose shell	\$ 800.00	18,422.50	20,644.65
Boxes		140.00	
		-----	-----
		\$ 66,382.50	\$ 48,327.85
<b>VALUE</b>			
Shellstrings		119,550.00	69,208.00
Loose shell		184,225.00	206,446.50
Boxes		700.00	
		-----	-----
		\$ 304,475.00	\$ 275,654.50
<b>EQUIVALENT CASES</b>			
Shellstrings		19,925	11,535
Loose shell		12,282	20,645
		-----	-----
Total		32,207	32,180



## **CHAPTER XIII**

### **INDUSTRY OFFICIALLY RECOGNIZED THE ECONOMIC VALUE OF THE PACIFIC OYSTER INDUSTRY**

At this point I shall quote from a public document issued by Secretary of State, Ernest N. Hutchinson, during his term of office. The title was "Oyster Culture a Natural Resource Revived". It is well prepared and contains some interesting comment on Pacific oyster culture. Quoting from page 3:

"The Japanese or Pacific oyster, large and luscious, grows so rapidly after transplantation to Washington that this state now produces over 90 % of the oysters on the Pacific Coast. Seeded like wheat, picked at low tide like potatoes, hoisted on scows in huge 25-bushel baskets, these Japanese oysters are now an annual crop. This amazing industry ships more than 2,000,000 pounds a year and in 1935 it shipped 70,000 cases of canned oysters.

The document is divided into 35 sub-titles, the most important of which I quote in full.

"Title 5. Shells Strung on Wires

"In order to fill the demand for seed oysters, Japanese growers have perfected methods of catching seeds in large quantities. On the tide flats in Japan, frames are erected to support shells which are strung on wire. During the summer small oysters attach to these shells. In the following spring the shells are removed from the frames and packed in boxes, each containing about two cubic feet. The shippers guarantee from ten to twenty thousand living small oysters at the time the seeds arrive. During the last few years, the quality of seeds has rapidly improved while the price has consistently been reduced so that at the present time a box of seeds delivered in Seattle costs only between \$2.50 and \$3.00.

"Title 9. No Feeding of Crop

"Oyster culture has a peculiar appeal to a great many people. Perhaps it is because oysters are something mysterious which one ordinarily identifies as neither plant nor animal. Also, it is very interesting in that it is unnecessary to provide any food for the crop. One does not need to till the soil as with farm crops, or to feed the oysters as one would livestock. The sea water's tidal flow constantly brings large quantities of microscopic plants and animals on which the oysters feed.

"Title 14 Sanitation Regulated by Government

"The sanitary regulations of the State Department of Health are so rigid as to assure the absolute cleanliness and purity of any oysters which may be purchased on the market. They are grown in the purest of sea water, and in the plants in which they are opened and packed the sanitary methods which are used are at least the equal of those employed in the most modern dairy. It is almost impossible for harmful germs to get into the finished product.

"Title 15 "Stomach" Is Really Liver

"People sometimes make the statement that they do not like the "stomach" of the oyster because they have an idea that the dark material within the middle of the body represents the contents of the stomach and therefore think of it as something more or less unclean. This is a tremendous mistake, for the stomach is colorless and by the time the oyster reaches the consumer no food or other material is within the stomach. The dark portion of the body is the liver, and one naturally expects liver to have a fairly dark color as does the liver one purchases at the butcher shop.

#### "Title 16 Preventative Value

"In the modern days we are coming more and more to realize the value of eating foods which guard against disease rather than take medicine to cure the disease. As a valuable food to prevent types of diseases, oysters stand in the very first grade. The fact that they live in sea water and contain all of the minerals which are in sea water renders them ideal as a builder of blood, for the fluid of the human blood is very similar in chemical constitution to that of sea water. Of special benefit are the large quantities of iron, copper and manganese which the oyster stores up and which are the substances in liver so highly recommended for the building of red blood.

#### "Title 17 Will Cure Anemia

"Thus it has been definitely proven that oysters are highly effective in the treatment of anemia and since they will cure anemia, it is obvious that they will prevent it. A most recent finding is that although oysters contain a large quantity of copper, this copper is not stored up in the body, but is eliminated readily after serving its valuable health purposes. Furthermore, the meat of the oyster which contains copper was shown to facilitate the elimination of copper from the human system which has been obtained from other foods and which might become stored in the body and cause such a disease as cirrhosis or hardening of the liver. One wonders whether man has not long recognized this fact, because it has been the custom of imbibers of alcoholic drinks to recover afterward by eating raw oysters. Anyway, science has been showing that a proper calcium balance, to keep the blood stream sweet, is the factor maintaining a sweet disposition.

#### "Title 18 Sea Foods Prevent Goiter

"The great value of iodine to prevent goiter is widely known. Living in sea water, oysters are able to absorb sufficient quantities of iodine to supply human requirements. One oyster company has advertised, "An oyster a day keeps goiter away.

"Popular opinion still clings to the idea that foods rich in phosphorous, like milk and oysters, are great food for the brain. Perhaps these are the reasons for the predictions that American culture would reach its peak on the North Pacific Coast, for we raise different and bigger oysters here than anywhere else in the world, and as for milk, every dairy country in the world sends into the State of Washington to buy sons and daughters of our famous cows.

#### "Title 19 Live on Diatoms

"The food of the oyster consists of the microscopic plants and animals which grow in the open waters. These consist chiefly of diatoms, which are singlecelled plants. The oyster may be vegetarian. In order to separate these food organisms from the water, the oyster pumps water continuously by means of its gills and filters it, catching each organism and conveying it to its mouth. The food organisms are then swallowed and digested in the stomach.

#### "Title 26 25 Gallons Oysters Per Box of Seed

"Previous to 1929 only a few thousand boxes of seed were imported each year, but plantings have annually increased until during the spring of 1935 between sixty and seventy thousand boxes were planted in Washington waters. Oystermen have found that they are able to market a minimum of about twentyfive gallons of oysters for each box of seeds planted. During some years and on some grounds, it is claimed that as many as one hundred gallons have been marketed for each box of seeds. Only a small percentage of the tide land of the state has as yet been planted with oysters, and there is area available for more extensive development.

#### "Title 27 Seed Imports No Longer Necessary

"The Pacific oyster is beginning to propagate in Washington waters, and it is probable that within the next few years it will no longer be necessary to import seeds from abroad. Considerable investigation is being made to assist oystermen in this respect, and the growers themselves are making a great effort to catch seeds on their own ground.

#### "Title 28 Process of Propagation

"During the winter the body of the oyster appears full, firm, and white, due to the stored glycogen. As the water becomes warmer in spring this glycogen nourishes the development of germ cells; that is, the eggs of the female and the spermatozoa of the male. While the native or Olympia oyster is hermaphroditic, or of both sexes, the Pacific oyster is of only one sex. An individual oyster is either male or female. When the water is sufficiently warm during the summer, spawning occurs. Both males and females discharge their sexual products into the open waters, where the sperms fertilize the eggs. After fertilization, the eggs begin developing and within a few hours are small, actively swimming organisms. These free-swimming oysters are called larvae. As they develop they are washed back and forth by the tides, slowly increasing in size. When, after a considerable time, they have reached full size, representing the completion of larval development, they are ready to attach to some hard, clean object in the water.

#### "Title 29 Growth of Larvae

"Oyster growers plant shells to provide a clean surface to which the larvae may attach. Within a few hours after the attachment or setting, the small oysters or spat begin to grow. At this stage they are almost microscopic. Within a few weeks they grow to the typical oyster shape and become quite dark in color, so that they are readily seen and identified.

#### "Title 30 High Mortality

"Oyster larvae feed on various microscopic organisms in the water and in turn are fed upon by a great variety of larger organisms, such as the jelly fishes, barnacles, worms, and similar animals. The tides may carry them for long distances, and they may be left to dry up and die on the beach as the tide goes out. Although many agencies kill large quantities of larvae, nature allows for a great mortality by causing the female to discharge enormous numbers of eggs. When it is realized that a market-size female oyster may discharge half a billion eggs in one season, it may well be understood that the oyster industry does not need or want to catch and grow all of the resulting larvae.

#### "Title 31 When to Put Out Shells

"One of the greatest problems of the oystermen is to determine when the time of attachment of the larvae will arrive so that they may plant shells or other materials to which the larvae may attach. This is very necessary because shells readily become covered with silt and slime and no longer provide favorable surfaces for the attachment of the larvae. If the shells are put into the water at exactly the right time, the larvae attach in tremendous numbers, while but few may be caught on the older, dirty shells.

"A more recent development is the use of a manufactured spat collector. This is made of pasteboard, a modification of the common egg crate filler, and is coated with a thin layer of concrete. These collectors are placed in the water and provide an almost ideal surface for setting. The fundamental principle of this collector has for its purpose to provide a large amount of under horizontal surface, which has been found to be most favorable. Accurately performed experiments have shown that almost no spat are caught on upper horizontal surfaces; and on vertical surfaces only about one-third as many set as on under horizontal surfaces. This collector promises to be of great value in the local production of Pacific seed oysters.

### "Title 32 Natural Seed Available

"During the last few years a considerable portion of the profits of the Pacific oyster industry has necessarily been going abroad as the cost of seeds. While there appears to be an inexhaustible supply of seeds available for importation at a very low cost, it is essential that methods of catching seeds within local waters be developed. Indications to date show that this is not only possible but practically certain. In various portions of Willapa Bay and Puget Sound, areas may be found in which there is a very considerable natural set of seeds.

### "Title 33 Native-Set Oysters

"In Willapa Bay these native-set oysters may be found and caught on very large four and five year old oysters which have grown almost straight upward from the ground, and, therefore, kept relatively clean. The finest catch in the state may be found in portions of Hood Canal, where the rocky beaches are literally covered with millions of small oysters. Already commercial attempts are being made with a high degree of success in Hood Canal, and it is possible that this area alone within the next two or three years will be able to supply the waters of the entire state with seeds.

### "Title 34 Americanization of Species

"There is no question but that as this species of oyster becomes thoroughly adapted to conditions in our waters it will propagate more and more profusely. This will not only keep all of the wealth within our own borders, but, also, it will represent the complete Americanization of the species, and eliminate any possible stigma that may attach to the industry due to its dependence upon a foreign source of seeds.

### "Title 35 Biologist Plays 'Dan Cupid'

"The greatest difficulty to date in obtaining seeds has apparently been due to the fact that most of the waters of the state are generally slightly too cool to stimulate the natural spawning activities. Man, however, is able to overcome this difficulty by taking advantage of the results of certain scientific experiments on the breeding behavior of oysters. It was found several years ago by the U.S. Bureau of Fisheries that an oyster of one sex is able to cause one of the opposite sex to spawn. If a male oyster spawns, its sperms come into contact with a neighboring female, causing it to discharge its eggs, which are immediately fertilized by the sperms. Some of the eggs come into contact with other males, causing them to spawn and they in turn affect other females. If, then, spawning be started when the water is warm enough, a wave of spawning activity passes over the entire oyster bed, resulting in the releasing of billions of eggs which develop into free swimming larvae and are potential seed oysters."

There is one subject that I have failed to cover. That is shipping mortalities in per cent. In the report of the State Biologist Woelke, some tables have been prepared covering this subject. This is a technical scientific study of mortality in the various stages the seed must pass through before shipment.

A lot of time and study must have been made in securing the material contained in said tables. There is a percentage of mortality during the period of selecting and packing the seed, also shipping mortalities. Space prevents including these tables and I believe that the summary is sufficient to make these losses understandable. Following table six the following appears:

### **SUMMARY**

"In 1953 the losses in a total of 18 separate lots were evaluated (Woelke, 1953). These included seed from nearly all villages with one or more lots placed aboard each seed-carrying ship. Both broken and unbroken seed were considered. From these experiments it was concluded that the unbroken seed suffered a slightly higher mortality than

the broken and normal mortalities could be expected to range between 5 and 25 percent, depending on time of season, village, type and condition of seed. In 1954 an effort was made to determine the losses by various sizes and conditions of the seed. An arbitrary condition scale was set up in which "hard" referred to spat with no growth at the edge; "medium" where new growth at the edge was not greater than one-fourth the total diameter, and "soft" where more than one-fourth of the diameter consisted of new growth. The "soft" seed apparently did not survive as well as the medium. The 1955 experiments showed that the medium did not survive as well as the hard. As to the size of spat, it is quite evident that the larger the spat, the poorer the survival. The results infer that losses on a given shipment should not exceed 15 percent if the seed is reasonably well hardened and of medium or small size."

During the early part of 1958 a prominent newspaper in Seattle printed this "Future of Oyster Industry Promising in Puget Sound."

One paragraph of said story appeals to me as containing valuable information I have not covered. It reads as follows:

"Through sieve-like gills, the bi-valve strains the sea water and catches in cilia, or hairs, multitudes of tiny organisms normally found in clean water.

"On this diet extracted from the water, not from the ground on which the oyster lives, the bivalve grows rapidly, reaching maturity in three or four years.

"On the dining table, oysters become delicious and nourishing treats of proteins, vitamins, and trace elements of iron, iodine, copper, phosphorous, cobalt and manganese all vital to the family's health.

"Every summer, oysters cast off millions of microscopic eggs that drift for several weeks with the tide before settling to some hard surface, where they grow to maturity. While oysters have an enormous reproductive potential, the survival rate of oyster spawn is low.

"By understanding the life cycles of the oysters, the growers devise, improve, and use many unique types of spat collectors, as the materials placed into the water for purposes of catching oyster larvae are known."

On the subject of The Nutritive Value of Oysters I recall one of the interesting experiences of my life.

In the fall of 1933 I attended The National Convention of The Oyster Growers and Dealers Association of America. It was held in New York.

A friend took me to the display room. There were many things on display of interest to an oysterman, but that which was of greatest interest to me was a display of rats.

They were in a large box cage covered with wire. It was partitioned into four stories high and each story into at least four compartments. In each of these was a family of rats, from two to six in number.

I asked my friend, "What is this rat cage all about?" The answer was "Read the tabs attached to each compartment and you will learn one of the most valuable and interesting stories ever told to an oysterman. It reveals a truth that should be of interest to every living person about oysters. Our advertising program is attempting to impress the minds of the public on the nutritive value of oysters as shown by the experiments with these rats.

"You will see by the charts on the wall which analyze the results of rats given other kinds of food."

The experiments had been conducted under the Bureau of Fisheries, Frank T. Bell, Commissioner.

These results were published in 1933 by the U. S. Department of Commerce.

This information is of such importance that I feel it should be copied in part:

It is known as investigational report No. 17, Volume I.

"From the above results, it is evident that the minimum effective level of dried oyster sample No. I lies between 0.14 and 0.28 gram or on an undried basis between 1.0 and 2.0 grams. Since the amount of iron furnished daily by the milk was approximately 0.035 to 0.05 milligram, the results indicate that the minimum daily iron requirement of the rat for complete hemoglobin regeneration in 8 weeks lies between 0.17 and 0.30 milligram when supplemented with the amounts of copper and manganese used in these experiments."

### **SUMMARY AND CONCLUSIONS**

"The finding of large amounts of iron and copper in the oyster prompted a study of the influence of the oyster in hemoglobin regeneration in rats rendered anemic on milk.

"In a preceding study, oysters from one locality (South Carolina) had been found to be markedly effective in regenerating hemoglobin in anemic rats. Hematopoiesis progressed at the same rate when the rats were fed either (1) dried oysters, (2) an acid solution of oyster ash, or (3) a solution containing only iron, copper, and manganese. This indicates first, that the inorganic elements present in the oyster are responsible for its antianemic potency, second, that the effectiveness of the oyster in nutritional anemia can be accounted for on the basis of its iron, copper, and manganese content, and third, that these metals are in a form easily available for blood-building purposes.

"In order to establish the status of the oyster as an important article of diet, the iron, copper, and manganese content of oysters from all the important producing areas of the United States were determined at two seasons, spring and winter. In general, oysters grown in waters along the Atlantic coast north of Maryland have a higher copper content and lower iron content than oysters grown in waters south of Maryland.

"The results reported here show that the oyster is equaled or excelled only by liver in the amount of iron and copper that it furnishes to the diet in an average serving. These metals in the oyster are readily used by animals for hemoglobin production."

"Oysters are known to contain all of the minerals which have been found necessary to maintain health and to promote normal reproduction and lactation. A combination of milk and oysters was found not only to permit good blood regeneration but also good growth, reproduction, and lactation in rats."

In October, 1942, Victor H. Lindlahr published a book on "How To Win and Keep Health With Foods". He is well known throughout the United States, if not the world, as an authority on food. Mr. Lindlahr is a specialist on this subject. In treating with oysters as a food his analysis is about the same as that of the investigators in the U. S. report as quoted.

"One of the few complete foods. Some of the proteins contained in oysters are of a grade comparable to those in organ meats. Use often in anemia because the iron and copper in oysters are easily available to the body. Exceptionally good source of iodine. Excellent source of the Vitamin B complex. Contains some Vitamins C and D. Easily digested except when fried. Makes a good main dish in meals for reducers, the elderly and convalescents. A frequent allergen. Leaves an acid ash.

How to Use:

"Buy oysters alive, or from a very reliable dealer. Nutritionally best when raw or baked. Oysters contain an albuminous substance which increases and hardens with an increase in temperature, just as does egg albumen; therefore, cook at a low temperature for a short time-160 degrees to 180 degrees."

## **CHAPTER XIV THE PATH OF DEVELOPMENT**

The historical facts concerning the development of the Pacific oyster industry on the Pacific Coast covers a period of approximately thirty-eight years; from 1921 when the first commercial planting was made in Samish Bay, Northern Puget Sound, to the present date. Today the industry extends from Alaska to Southern California. It began with an annual production of but a few hundred gallons, sold to a resisting market as fresh oysters. Today in excess of two million gallons production annually has been reached, with a value around ten million dollars. Today they not only are marketed as fresh oysters, but as processed oysters; canned, frozen, stew, breaded and smoked. The markets have been extended from the neighborhood towns to the Coastal States, then to the Rock Mountain States, the Central, the Eastern and the Southern States. In fact, at least with the processed oysters, the entire United States, Canada, Alaska and Hawaii, have been reached with limited supply. True, there are vast areas where the markets to this date have been very limited and underdeveloped, but they have been introduced and in my judgment the markets will be expanded as the supply increases.

In the beginning but a few men were employed on the beds but as the industry has grown, thousands of men and women are employed on the beds in cultivation and harvesting the oysters, in the shucking and packing plants, and in the canneries and processing plants. Other thousands are employed in Japan in producing the seed.

The oyster growers are paying for seed over \$250,000.00 a year (including freight). It has become an industry of great economical value. I have told the story in a general way of the efforts, sacrifices and hard work; of the success, the failures, the joys and the sorrow of those loyal pioneers of the industry as they struggled through periods of depression, war and market development. Now to clarify the picture it is of interest to give you more detail geographically as to the path of development. To do this, so far as the limits of memory and written facts will permit, I will give the history of each Pacific oyster area, supported by statistical tables, and facts gleaned from published articles and documents.

### **Statistics**

Statistics, as such, are, to many people boring and uninteresting, but in this case I believe that to anyone who has had interest enough in this subject to read what has gone before, a few statistics will help to clarify the picture I have attempted to outline.

In preparing the following tables I have found it very difficult to arrive at exact figures. I have used:

1. Records of Pacific Coast Oyster Growers Association. These are correct as to all seed purchased by it for its members and others.
2. Statistics published in the "Pacific Fisherman".
3. Reports published by the State of Washington Fisheries Department.
4. Fisheries reports from British Columbia, Oregon and California.

In these statistical reports some discrepancies are found, due largely to the fact that seed may be shipped to a point of entry in one state and transferred to another for planting. However, the discrepancies are very small. A careful check has been made and the tabulated results are substantially correct.

### **STATISTICS**



**TABLE I-A**

**CASES OF SEED PLANTED FROM JAPAN, PURCHASED THROUGH THE  
PACIFIC COAST OYSTER GROWERS ASSOCIATION**

<b>year</b>	<b>cases</b>	<b>no. of</b>	<b>Puget</b>	<b>Willapa</b>	<b>Grays</b>	<b>Oregon</b>	<b>Calif.</b>	<b>B.C. &amp;</b>
1924	492	1	492					
1925	840	1	840					
1926	1,403	1	1,403					
1927	4,050	1	4,050					
1928	1,367	1	1,367					
1929	1,500	1	1,500					
1930	2,750	1	2,750					
1931	2,910	5	600	2,310				
1932	21,800	12	16,297	5,503				
1933	34,741	56	20,039	14,522	180			
1934	64,550	55	47,740	16,445	300	65		
1935	71,787	156	16,664	50,257	1,123	901	2,465	377
1936	42,953	128	5,067	27,840	530	1,748	3,725	1,043
1937	29,350	102	5,394	19,082	2,690	2,184		
1938	14,705	66	4,598	6,354	725	2,116		912
1939	15,757	65	4,537	7,455	2,000	1,150		605
1940	13,493	59	3,302	8,767	286	638		508
1941	13,422	51	4,517	4,455	700	750		3,000
1942,	1943,	1944,	1945,	1946	no seed	because	of WWII	
1947	56,704	91	10,142	22,933	5,230	15,357	750	2,292
1948	32,839	87	7,524	14,685	1,150	5,955	850	2,675
1949	45,873	141	11,177	17,357	7,425	4,720	350	4,844
1950	45,706	151	12,575	16,512	1,550	9,300	565	5,204
1951	51,900	142	15,804	18,565	2,250	9,523	350	5,404
1952	58,729	172	19,907	20,364	4,001	10,523	350	3,584
1953	46,011	177	16,828	17,788	2,900	6,810	250	1,435
1954	62,150		22,738	32,087	7,325	953	2,526	1,576
1955	50,675		19,405	30,424	846	386	1,854	1,875
1956	45,159		22,563	15,658	1,333	1,000	800	3,290
1957	43,881	128	15,427	22,388	6,066	1,050	600	3,382
1958	25,675	110	14,695	5,290	300	1,619	230	3,360
1959	15,083	98	9,402	4,134	402	846	300	270
<b>TOTAL</b>	<b>918,245</b>		<b>342,364</b>	<b>401,175</b>	<b>49,311</b>	<b>77,594</b>	<b>15,965</b>	<b>45,634</b>

NOTE: 1942, 1943, 1944, 1945, 1946- No seed on account of war

(1960-61) 80,595  
-----  
998,840

\*The above tables I-A and I-B were prepared prior to 1960-61 shipments. These were as follows: 1960, 36,304 cases delived in Washington ports. In addition to this, after March,1959, 4,291 cases were shipped into California.

#### ANALYSIS:

1. First column shows date of planting. The growth period to the time of harvesting varies from two to four years; the average under normal conditions is three years.
2. Number of buyers through association.
3. Second column indicates the number of cases of seed shipped in that year. One case holds just over two bushels. The shipping box has been changed very little, if any, since the beginning. It is the same whether it is filled with broken or unbroken seed.
4. The remaining six columns show the destination or port of delivery as indicated. The grower has indicated in his order the port most convenient for his use.

#### COMMENT:

1. The years 1924 to 1931 are the years of introduction. There was but one shipper, the Rock Point Oyster Company of Samish Bay, Washington.
2. The years 1931 to 1936 were the years of cheap seed, rapid expansion and promotion. Accumulated surpluses and the depression with resulting low prices for oysters halted the all-time pre-war high of 71,787 cases in 1935.
3. From 1935 to 1942 shows a decline in seed shipments. Many growers, packers and processors gave up and closed down. Those remaining cut down their plantings to actual needs to supply developed markets.
4. From 1941 to 1947, the war years, no seed. During these years the industry had to rely on surpluses from previous over-planting (which proved to be several million gallons) and natural set seed, as shown in another chapter.
5. After the war two factors entered into the rapid increase in seed planting. First, the oyster beds had been depleted; second, on account of pollution the Olympia oyster had been almost exterminated and the areas replanted with the more hardy Pacific oyster, increasing seed requirements for lower Puget Sound.

#### TABLE I-B

**CASES OF SEED PLANTED FROM SEED PURCHASED BY OTHERS THAN MEMBERS OF  
PACIFIC COAST OYSTER GROWERS ASSOCIATION**

year	cases	Puget	Willapa	Grays	Oregon	California
1951	1,000	1,000				
1952	24,500	4,000	18,500	2,000		
1953	23,636	5,755	13,881	2,000	2,000	
1954	2,234					2,234
1955	1,800					1,800
1956	26,581					26,581
1957	17,554					17,554
1958	14,739				1,000	13,739
1959	12,370					12,370
1960	90,042	10,745	22,933	5,230	15,157	35,977
<b>TOTAL</b>	<b>214,456</b>	<b>21,500</b>	<b>55,314</b>	<b>9,230</b>	<b>18,157</b>	<b>110,255*</b>

\*California data furnished by Department of Fish and Game of California.

Total seed from Japan by P.C.O.G.A., Table I-A	998,844 cases
Total seed bought by non-members, Table I-B	214,456 cases
	-----
Grand Total from 1924 to 1961 inclusive	1,213,300 cases

This means that the oyster growers of the Pacific Coast, at an average cost of \$7.50 a case, have paid out \$9,099,750.50 for seed from Japan. Also at an average yield of 20 gallons to the case, they have produced 24,266,000 gallons of oysters. At an average value of \$4.00 per gallon after processing, the total value would amount to \$97,064,000.

These figures are based or estimated facts set out herein. I believe them to be conservative.

Until after the war most of the seed was purchased through the Pacific Coast Oyster Growers Association. The small amount purchased by others, if any, up to that time, has been included in Table I-A. Later, as set out in the text, certain large producers sent their representatives to Japan and made their purchases direct. Table I-B, so far as official records show, is for the purpose of completing the totals of seed planted on the Pacific Coast. Especially in California extensive new areas have been planted.

**Kumomoto Seed**

Practically all seed from Japan from the beginning has been species ostrea gigas, the same as the original plantings. These have been mostly from Miyagi Prefecture, where the Japanese seed industry for export seed was started. Several other species have been experimented with but without success. The only one that has been of commercial value is a small oyster, shipped from Kumomoto, Japan, known as "Kumomoto Seed". It is a very small oyster and growers have had hopes that it might meet favor as a cocktail oysters to take the place of the declining supply of Olympia oysters. Many problems have arisen connected with receiving a dependable supply of good seed. Only about 5,000 cases of seed have been received during the years since the war.

Should the Japanese Kumomoto seed growers be able to develop a dependable quantity and quality of seed, this oyster would find favor in this country, especially as a cocktail oyster.

Memo: Since preparing the above, the following shipments of Kumomoto seed have been imported

1960, 1,004 cases; 1961, 1,200 cases at the price of \$9.25 per case unbroken, \$9.75 per case broken (F.O.B. Shiagama, Japan). This increase must indicate that at least some of these problems have been solved.

### **North Puget Sound**

I will start the history of the different areas with comments on the place where the Pacific oyster was born, Samish Bay in Northern Puget Sound, and continue to cover the different localities or districts in the order so far as is possible, that Pacific oysters were first planted there.

Samish Bay has always been a natural oyster bed. In 1928 Dr. Paul C. Galtsoff, Ph.D., biologist, in charge of oyster fisheries investigations, United States Bureau of Fisheries, in company with biologist, H. C. McMillan, visited the Samish Bay oyster beds. The results were told in Document No. 1066, published in 1929 by the U. S. Bureau of Fisheries.

To quote: "Local fishermen still remember the old days when the bottoms of Willapa and Samish Bays were thickly covered with oysters, and the schooners on their return voyage to San Francisco used to take several tons of them for ballast." He gives data as to the tidal depth, temperature and other factors entering into the quality of an oyster bed, shows pictures of four year old oysters (three years from planting of the seed) and the measurements, "size 11 by 8.4 cms." His predictions were that the industry would expand.

An article by Dr. Trevor Kincaid, the biologist instructor, State University of Washington, published in November, 1931, in the Pacific Fisherman, was filled with enthusiasm and predictions for the success of the new industry. He had spent two summers at the beds of the Rock Point Oyster Company in Samish Bay, as previously related in an early chapter.

The fulfillment of these predictions will be shown in Table 2 below. This table not only covers seed planting, but from 1939 to 1959 it shows gallons of oysters harvested each year and the number of tons of pulp produced by the Puget Sound Pulp and Timber Company of Bellingham, which started operation in 1927. That part of the table will be referred to in a chapter on Sulphite Liquor.

### **TABLE 2-A**

### **SAMISH BAY**

**Puget Sound  
Pulp & Tbr.Co**

year	cases seed planted	Rock Point Oyster Co.	Number Growers	Gallons Oysters marketed	Daily Pulp produced TONS	Efluent efficiency c/c	Alcohol produced
1924	492	492	1				
1925	840	840	1				
1926	1,403	1,403	1				
1927	4,050	4,050	1				
1928	1,367	1,367	1				
1929	1,500	1,500	1				
1930	2,750	2,750	1				
1931	600	600	1				
1932	500	500	1				
1933	600	600	1				
1934	500	500	1				
1935	3,630	700	9				
1936	2,709	957	8				
1937	3,319	800	16				
1938	2,542	500	11				
1939	1,970	600	15	35,941	258		
1940	2,250	800	10	48,182	350		
1941	3,860	1,250	15	61,011	392		
1942	250			31,311	421		
1943				26,070	278		
1944				20,094	271		
1945				21,481	267	4.843	1,293
1946				29,519	231	7.589	1,753
1947				37,193	307	8.362	2,540
1948				34,753	351	8.334	2,926
1949		600		32,977	267	6.408	1,711
1950		1,000		14,969	354	7.353	2,603
1951		1,100		17,192	375	7.947	2,980
1952		1,350		19,421	375	7.864	2,949
1953		600		24,615	395	7.182	2,837
1954		3,562	D1	27,252	419	6.360	2,665
1955		2,400	D2	7,591	441	7.444	3,283
1956		1,700		11,907	441	7.540	3,343
1957		1,000	D3	7,500			

D1 Includes 2,000 cs. from Dabob Bay, Hoods Canal

D2 Includes 1,000 cs. from Dabob Bay, Hoods Canal

D3 Includes 500 cs. from Dabob Bay, Hoods Canal

\* Alcohol produced daily. (Thousand gallons per year)

"c/c eff" is factor of alcohol and pulp to arrive at a comparative efficiency of the alcohol plant.

\*Accurate oyster and pulp production prior to 1939 not available.

The amount of seed planted shows a rapid expansion of area planted up to the locating of the pulp mills in Bellingham and Anacortes about 1927.

### **Padilla Bay**

Padilla Bay is another arm of the North Puget Sound area. It lies to the west of Samish Bay. It is about the same size, and has the same amount of oyster bottom land as Samish Bay. It has been estimated at approximately 10,000 acres in each bay. These flats in each bay uncover at low tide, and are covered by eight to nine feet of water at ordinary high tide.

Mr. R. H. Bailey and associates owned 3,000 acres of this tide land for many years prior to 1930. He relates that in the early days there were scattered native oysters the same as in Samish Bay, showing it had the natural qualities for the growing of oysters.

In 1931 Mr. Bailey procured forty cases of Japanese oyster seed, the same as was being planted in Samish Bay, and test planted them in Padilla Bay. Being satisfied with the results, he and his associates, then organized and incorporated as the Padilla Point Company, planted, in 1933, 33,300 cases of seed. In 1934 they planted an additional 47,200 cases of seed. They also, to take care of these tremendous planting of seed, built a shucking plant large enough to accommodate 150 openers. This was in addition to the Fisherman's Packing Corporation salmon cannery at Everett, Washington, which was to be used to can oysters when salmon were off season.

At that time the Pacific Coast Oyster Growers Association had not been organized and the seed was purchased directly from the Japanese seed growers. They are not included in Table I-A or I-B. There were also further plantings by other growers in Northern Padilla Bay of which I have no official records. The plantings above referred to were furnished by Mr. Bailey, and verified by newspaper clippings I have on file, and my own personal knowledge. Later plantings in Padilla Bay are included.

The Pacific oyster industry in Padilla Bay, from the standpoint of production, has been disappointing. From personal observation I am satisfied that there is a large area suitable under natural conditions to produce a quality oyster in commercial quantities. The planting of seed has been abundant-perhaps during the early years too abundant. The equipment, facilities and management have been good, and their marketing arrangements such that the crops after processing would have been marketed. However the unexpected and unforeseen happened. Pulp mills both in nearby Anacortes and another in more distant Bellingham, were erected and began to use the waters of Puget Sound as a sewer. At first the output of these mills was small, but as years went by they increased the output. (See Table 2-A) The results will be more fully covered in the chapter on "Pollution". Further comment will also appear, covering their cannery and stew operations, in the chapter on "Processed Oysters".

Northern Puget Sound consists of many shallow bays along Hood Canal, Sequim Bay, and Dungeness Bay. The plantings in these bays are included in Table IRA under column "Puget Sound".

## Oregon Coast

In the year 1928 Dr. Paul S. Galtsoff made an inspection of the oyster industry on the Oregon Coast. In document No. 1066, published by the United States Fisheries, he opens his comment with the following statement: "The oyster industry in Oregon is insignificant, for, according to the statistics of the United States Bureau of Fisheries, its annual yield in 1925 amounted to only 1,453 bushels, valued at \$4,300.00. The coast line of the state is straight and unbroken, with very few small bays or harbors which give protection necessary for growth of the oyster. Along a coast line of over 300 miles from Fort Stevens, at the mouth of the Columbia River, to the California-Oregon state line there are only three localities (Tillamook, Yaquina River, and Coos Bay) that produce oysters."

Up to that time no Pacific oysters, *ostrea gigas*, had been tried. Some Eastern oysters had been tried near Oysterville.

Quoting further from Document 1066:

"The Tillamook region consists of Tillamook and Netarts Bays. The first is a small inlet 64 miles south of the mouth of Columbia River that in recent years has produced no native oysters. Some years ago oysters were bedded out in the bay to await shipping and a few were left, but no young oysters were found when the place was visited in October, 1928. Netarts Bay is a small and shallow body of water that has very little fresh water entering it. According to Edmondson (1922) nearly all the water runs out, leaving the bottom exposed during extremely low tide. The salinity of the water is nearly that of the ocean. For some time native oysters were cultivated here, and a market was built up in the immediate vicinity, shucked oysters being sold in the city of Tillamook to the value of \$600 per season. During the last 15 years the trade has been neglected. The amount of oysters left over an area of 200 acres of public and private bottoms is estimated by local fishermen to be approximately 100 bushel; but even with such a small number of adult oysters there is a fair set of young oysters every year. The number of oysters sold is negligible, most of them being consumed locally.

"The Yaquina River is the center of the oyster industry in Oregon. The most productive areas are found about one mile above the town of Yaquina, near Oysterville, where both private and public natural beds are located, the latter being under the control of the State fish and game commission. According to Holmes (unpublished report to the Bureau of Fisheries, 1927) there are approximately 135 acres of oyster beds along the lower four or five miles of the river from the town of Yaquina to Boon's Point. Several years ago a company known as the Oregon Oyster Co. acquired title to all of the private oyster bottoms and leased the publicly owned ones from the State.

"According to Edmondson (1920) the setting of young oysters in Yaquina River takes place every year, but difficulty in the cultivation of oysters is caused by sediment carried down the river. To prevent the oysters from being smothered, the beds should be tonged frequently.

"In 1897, under the direction of the State biologist, eastern oysters were planted near Oysterville. It was reported that the oysters spawned but no setting occurred, and after several years of trial the attempt to introduce the eastern oyster was given up.

"Coos Bay, one of the larger bays of the State, is of irregular shape, having some resemblance to the inverted letter 'V' and has broad mud flats that once supported an abundant growth of native oysters. This is shown by the great quantities of shells cast out by steam dredges in the process of deepening the channel. At present there are no oysters in Coos Bay. The Indians believe that they were destroyed during the great forest fire more than 80 years ago. According to Edmondson (1922), 14 acres were set aside by a group of local men and planted with native oysters in 1917. The experiment was a success, and a satisfactory amount of spat was collected in 1917 and 1918. The project to increase the acreage and plant more oysters was discussed but not undertaken and later on was discontinued entirely. During the author's visit to Coos Bay in October, 1928, there was no person in Marshfield

and North Bend who knew anything about the oyster beds or planting experiments in the bay, although inquiries were made in the local Chamber of Commerce and among the fishermen. All the oysters sold in local fish markets were received from Olympia and Portland."

Not long after the Pacific oyster had found its way in Willapa Harbor in the 1930's it was introduced into Oregon. It was found that much of the tideland that had never been used for growing native oysters, as well as the land, referred to in Document 1066, was suitable for the Pacific oyster and an increase in the Oregon oyster industry was rapidly expanded.

See table I-A. It shows a test planting of sixty-five cases was made in 1934. The results were satisfactory. In 1935, 901 cases were planted. Before the war, only a period of six years, a total of nearly 10,000 cases of seed had been planted, with a total production of approximately 400,000 gallons. Following the war plantings of 15,357 cases were made. This varied from year to year, but to date during that eleven years there have been an average of over 6,000 cases of seed planted annually, with an annual Production of over 200,000 gallons. That is a substantial quantity of oysters. It is far in excess of what could have been expected in view of the conditions described by Dr. Galtsoff in 1928. The value of such a crop would be close to a million dollars per year. Opening or shucking plants, and other processing plants have been built. Altogether it means continued employment for many people. The economy of the State of Oregon has been benefited. The oyster growers of Oregon have done a good job in developing this natural resource, and they are to be congratulated.

In 1958 the Pacific Oyster Growers Association published a list of members showing seven Oregon companies. The quantity of seed from Japan as shown in Table I-A used in Oregon is the best statistical record I have been able to find.

The Hayes Oyster Co. of Ocean City, Oregon, now owns and operates a considerable part of the producing oyster land in Oregon. It purchases seed directly from Japan and not through the Association. Much, if not all, of the Oregon plantings are landed in a Washington port and transferred to the oyster beds in Oregon. Therefore there is no official record showing the amount of seed that has been transferred in that manner.

The late Louis Wachsmuth, of Portland, Oregon, was one of the early oystermen in Oregon. He cultivated the native oyster in Yaquina Bay. He also operated an oyster house in Portland which is still being operated by his sons. It has become famous and has a fine reputation as a seafood and oyster bar. Pacific oysters have also been grown in the Yaquina Bay area. Louis Wachsmuth passed on in 1957.

The late Jesse Hayes of Bay City, Oregon, was another oysterman who took up the growing of Pacific oysters in the early 1930's. He was formerly a member of the Fish Commission of the State of Oregon and operated oyster beds in Tillamook Bay, Oregon. He passed on in 1957 and his family continue the oyster operation. His sons, Sam and Vern Hayes have control of extensive oyster land in Oregon and have been very active in the development of the industry in Oregon, and operate as the Hayes Oyster Company.

Glenn DeHaven of Dallas, Oregon, has been mentioned at various times in the script as a trustee of the Pacific Oyster Growers Association. He was manager of The Oyster Farmers Co-Operative with offices in Salem, Oregon, and for many years was chosen to represent the interests of the Oregon oyster growers in said Association. He was a very able manager, well versed in all phases of the industry, and his counsel was of much value in solving the problems of the industry.



## **CHAPTER XV PACIFIC OYSTERS, FROZEN AND PROCESSED**

As will be noted in Table I below that the first records of processed Pacific oysters was in 1931. To the best of my recollection the first cannery was in Everett. It was operated by the Padilla Point Oyster Company under the control of R. H. Bailey, who was planting extensive beds in Padilla Bay. They packed oyster stew and frozen oysters.

About this time the Willapoint Oysters, Inc., located at Bay Center, under the management of G. T. Morgan, built and operated a cannery. It likely has been enlarged and modernized and is still operating.

By this time large areas in Wallapa Bay had been planted. The markets had been flooded with fresh oysters, the price had declined below the cost of production, and the need of canneries was being felt.

The new industry arose to the emergency. From the November, 1931, Fishing Gazette, the situation was published. I quote in part.

"Inasmuch as the State of Washington produces 95 percent of all the oysters raised on the Pacific Coast, it is well to check up on the salient factors in the industry.

"To begin with, Washington is favored with three large bays or inlets from its rugged coast, Willapa Harbor, about 35 miles long and ten miles wide at its extremes, Grays Harbor, a smaller bay north of this, both on the Washington coast, and the vast area of inlet and island studded Puget Sound, which together with that part known as the Straits of Georgia, extends for about 200 miles southward from the Canadian boundary, and is fed by the Straits of Juan De Fuca, a 100 mile strait leading to the Pacific. A maze of shallow bays near the southern end, and along Hood Canal, Sequim Bay, Dungeness Bay, Henderson Bay, Samish Bay, Padilla Bay, are ideally suited for oyster culture. The entire Puget Sound system embraces about 3,500 miles of shoreline and is roughly 3,000 square miles in area. Oyster bottoms are divided about as follows: Willapa Harbor, 25,000 acres; Grays Harbor, 10,000 acres; Puget Sound divided into Padilla Bay, 15,000 acres; Samish Bay, 15,000 acres, and balance of smaller bays and inlets, about 15,000 acres.

"On the Canadian side on Vancouver Island, there are about 20,000 acres suitable for growing, totalling in all for the three North Pacific bays around 100,000 acres of potential oyster bearing lands. Because of the widely varying characteristics of the Olympia and Jap oysters, plantings of the Jap oysters will be confined to that part of Puget Sound north of the mouth of Henderson Bay. At the present time there are only about 1,000 acres under actual cultivation of the Jap oyster, and in 1931 the total harvest is estimated to be about 80,000,000 oysters.

"Already the Willapa Bay growers are organized, have adopted trade names and are outlining heavy advertising campaigns, and the Samish Bay and Padilla Bay companies on Puget Sound are doing likewise. During 1931 heavy plantings over a very wide area have been made, which will come on the market in 1932 and 1933. Beds have been started on Henderson Bay and down on Grays Harbor, and along many of the shallow reaches of flats bordering Puget Sound.

"Already this fall extensive preparations have been made through the cooperation of the Port of Willapa Harbor Commission for building a cannery at South Bend to can the surplus of the 1931 crop. Last year 1,100 cases were processed as an experiment and carefully scattered to a widely assorted group of merchants. Results indicate that the canned product is an almost perfect oyster, light in color, the right texture and will yield a far higher price than the Gulf oysters that are canned and brought in."

In September, 1935, the Pacific Fisherman, knowing the need of a good product in canned oysters, published an exhaustive article entitled "Opening and Cooking Methods Vital In Oyster Canning. Quoting in part:

"Quality of canned Pacific oysters depends in large degree upon the character of the steaming process by which the oysters are opened, in the view of Harland Johnson, superintendent of the Long Island Oyster Co. cannery at Bay Center.

"He thinks the character of the retort in which the oysters are sterilized also is an important item in producing a thoroughly No. 1 quality pack.

"Mr. Johnson has run three different oyster canneries, each employing its individual method, and he believes sincerely that the practice at the Long Island plant is a real advance in oyster canning. The Bay Center plant is finishing its first season of oyster canning, and is a rather small establishment, but Mr. Johnson manages to get a surprising volume of oysters through it."

The article also comments on smoked oysters packed by the Willapa Oyster Company. They had packed and sold over 1,000 cases in Seattle, Portland and New York.

These conditions encouraged others to enter the processing of the surplus oysters. It, that is, the increasing by canning of oysters, freezing, smoking, oyster stew or soup, you might say saved the industry. In 1938 Lyle Blanchflower of South Bend, built a large plant exclusively packing frozen oysters; the Coos Bay Association erected a canning plant at North Bend, Oregon. Ben Nauman built one on Samish Island, and the Nelson Crab and Oyster Company one at Toke Point. As the years have gone by others have been constructed. Wiegardt Brothers and Ilwaco Oyster Company built plants to accommodate both canning and fresh oysters. Hollway and Heckas, E. Bendickson, and others have become well known for their extensive supply of fresh, canned, smoked and frozen oysters in Oregon and California. The Coast Oyster Company has plants to process oysters in any manner in Washington, Oregon and California.

Table III, below, as published on January 25, 1960, will give one an idea of the rapid growth of the Pacific oyster industry and of the investment made by capital. It has also supplied employment to thousands of people.

#### **TABLE 111-A**

Pacific oyster operations advanced moderately in 1959, but without showing any striking growth trend.

The industry enjoyed a stability not always recorded, and consolidated gains against anticipated expansion in yield and market.

Canning of oysters and oyster stew both held close to the marks of former years, but it appears that both in fresh and frozen oysters some advances were made.

Technical advances in oyster freezing bear much of promise, and to them can be traced perhaps the most significant of all 1959 developments-the undertaking at Hiroshima of a modern oyster freezing and canning enterprise by Nichiro Gyogyo Kaisen Kaisha, one of the world's great fishery corporations. This project is being developed in the spring of 1960 in connection with the Coast Oyster Co.

#### **TABLE IV-A PACIFIC CANNED OYSTERS AND OYSTER STEW**

**Season 1958-1959**

CANNED OYSTERS (cases of 48 cans)				CANNED OYSTER STEW (cases of 48 cans)		
No. 1 E.O.	"Buffet"	Other Sizes	Total Basis Std. Cases	No. 1 E.O.	"Buffet"	Total Basis Std. Cases
53,301	62,243	2,359	106,881	194,791	27,363	216,683

**PACIFIC OYSTER CANNED, equivalent of standard cases of  
48 No. 1 E.O. Packed in:**

1959	125,251	1949	113,989	1939	112,549
1958	131,266	1948	83,489	1938	111,348
1957	128,493	1947	57,205	1937	110,872
1956	109,559	1946	89,050	1936	118,853
1955	124,497	1945	3,184	1935	88,062
1954	100,687	1944	none	1934	68,323
1953	114,687	1943	583	1933	32,315
1952	112,415	1942	72,315	1932	12,233
1951	132,140	1941	178,445	1931	7,930
1950	120,742	1940	148,870		

**PACIFIC CANNED OYSTER STEW, by seasons, basis standard cases  
of 48 No. 1 E.O. cans**

1958-59	216,683	1955-56	182,179	1953-54	134,111
1957-58	268,907	1954-55	170,058	1952-53	87,536
1956-57	273,288				
1935-36---40,000; 1934-35---40,000, Padilla at Everett					

In 1958 Pacific Fisherman published a table of statistics showing where the canneries were located and their output during the fiscal year 1957-1958:

**PACIFIC CANNED OYSTERS  
Season of 1957-1958**

Company and Cannery Location	No. 1 E.O.	Cases of 48 Cans		Total Cases as They Run
		Buffet	8 oz	
Bendickson Co., E.H., South Bend, Wash.	26,000			95,316
Coast Oyster Co. South Bend & elsewhere	17,984	26,587		44,571
Haines Oyster Co., Seattle, Wash	212			212
Northern Oyster Co., Oysterville, Wash	40	40		80
Wiegardt Brothers, Ocean Park, Wash	21,576	2,877		24,453
<b>TOTAL</b>	<b>65,812</b>	<b>29,504</b>		<b>95,316</b>

Smoked oysters in considerable quantities and frozen oysters have absorbed and used many thousands of gallons, but separate statistics are not available. However, the importance of frozen oysters to the industry and the new packing technique being studied was recognized in the Pacific Fisherman. To quote in part:

"Technological development being undertaken in connection with frozen oysters looks toward the freezing of oysters individually after they have been dipped in a protective edible glaze to prevent them from freezing together in the package. This procedure is regarded in the Pacific oyster trade as promising important stimulus for frozen oyster sales."

During the past few years a new problem has confronted the Pacific Oyster industry. The imports of canned oysters have increased at an alarming rate. Due to the low cost of labor in the countries from whence they are produced enables them to sell at a price lower than our oysters. We are striving to find the answer. In January, 1959, Pacific Fisherman published official statistics as follows:

**TABLE V-A  
IMPORTS OF CANNED OYSTERS 1949-1958**

Year	JAPAN		HONG KONG		OTHER COUNTRIES		TOTALS	
	Pounds	Value \$	Pounds	Value \$	Pounds	Value \$	Pounds	Value \$
1948	11,955	5,950	17,887	17,884	127,634*	118,513*	157,526	141,911
1949	82,704	49,543	12,176	11,556	241,402*	241,913*	336,282	303,012
1950	205,104	97,667	18,730	13,004	215,392*	152,060*	439,226	262,731
1951	731,335	334,774	183,859	132,558	105,193*	73,065*	1,020,387	540,397
1952	491,214	274,905	120,247	83,467	1,399	408	612,860	357,780
1953	606,322	324,410	62,498	59,743	755	866	669,576	385,019
1954	891,349	369,348	231,795	246,493	4,490	2,162	1,127,634	618,003
1955	1,286,325	504,550	180,750	165,864	4,066	2,276	1,471,141	672,690
1956	1,711,039	636,851	207,573	175,645	2,065	1,203	1,921,493	813,955
1957	2,432,215	814,586	240,349	192,893	2,940	1,316	2,675,502	1,008,795
**1958	1,851,475	552,019	138,069	103,013	20,044	6,959	2,009,588	661,991

\* Production from China made up bulk of these figures.

\*\* Six months.

### CALIFORNIA

I have quoted from document 1066 by Paul S. Galtsoff, because I consider him the most accurate authority on Pacific oysters at that time (1928). He spent considerable time traveling along the coast and investigating every cove or inlet that had ever been populated with oysters. Several times I had done the same thing, so when he arrived in Olympia, I spent several days with him. We visited most of the Olympia oyster beds, and he took many pictures which were later used in document 1066, Pacific oysters were not being planted in Southern Puget Sound.

We then visited the beds of Pacific oysters in northern Puget Sound. Dr. Galtsoff is still living. I have enjoyed his friendship all these years. He has been recognized as one of the most able men of his profession.

In regard to the conditions he found in the California oyster industry I quote in part from page 394:

"The production of oysters in the State of California is but little greater than that in Oregon, and, according to the statistics of the United States Bureau of Fisheries, amounted in 1925 to 5,692 bushels a year, valued at \$23,394. The statistical report of the State division of fish and game for 1927 states that there were 2,223,058 eastern

oysters (approximately 7,410 bushels, counting 300 oysters to a bushel) marketed in the state. This figure can not be credited to the production of oysters in California, because the eastern oysters shown in the report were not grown in California waters but were brought in from the Atlantic coast and sold within two or three months.

"The native Pacific oyster has never been commercially important in California. It is fairly abundant on rocky reefs in protected waters but never has been cultivated as in Puget Sound. Townsend (1893) states that *Ostrea lurida* was abundant in San Francisco Bay, but that on account of its small size it was utterly worthless as compared with oysters from Washington. Extensive deposits of shells of this species found in the shallow water along the western part of the bay and dredged for various purposes indicate its former abundance in San Francisco Bay."

Dr. Galtsoff gave the history and described conditions found in each oyster bed area on the California coast. He first told the history of San Francisco Bay, the different kinds of oysters that had been planted there and how its value for oyster beds had been destroyed by pollution. As to Elkhorn Slough he says in part:

"Oyster bottoms of Elkhorn Slough were examined in March, 1929, by H. C. McMillin. The slough begins near the eastern extremity of Monterey Bay, from which it is separated by the high sand dunes. The main course of the slough passes through a narrow opening in the dunes and turns south, parallel to the ocean beach and about one-fourth mile or less from the latter. It is about two miles long and varies in width from 50 yards to nearly a mile. Several branches join the main channel of the slough at various places, two of them extending well up into the highland. The bottom and banks of the slough are of clay. During the construction of a road, piles were driven in the bottom, and rock, iron, and other material were thrown into the water. All of these have been found to give support for a good set of native oysters. Mussels and clam shells found on the bottom also have become the centers of oyster clumps covering the flats. All over the bay the setting is fair, the young oysters attaching themselves to any solid, clean surface.

"Because of lack of cultch, not over five acres of ground has been found to be productive, from which during this year about 200 bushels of native oysters have been taken. Small eastern oysters from Texas were planted about six years ago. They survived and are still taken in small numbers. It is believed that by reinforcing the bottoms and planting the shells the productivity of the Elkhorn Slough oyster beds can be developed.

"The possibility of cultivating eastern oysters appears to be rather uncertain, for temperature conditions along the Pacific coast are such as to preclude the possibility of its spawning and setting in the greater part of the **inshore** waters.

"The cultivation of the Japanese oyster is an important problem. Although this oyster is inferior in quality, in comparison to either native or eastern species, there is a demand for it and it does not compete directly with the marketing of other species. There are many reasons to believe that the present success in growing Japanese oysters in Samish Bay will induce other oystermen to engage in this business, and the importation of Japanese seed will grow.

"Another protective measure consists in restricting the planting of Japanese seed to such bays and harbors where there are no cultivated beds of *Olympia* oysters. If planting of Japanese seed is restricted to areas where the native oyster does not grow, then the possible danger will be minimized.

"As has been mentioned before, at present there is only a potential danger in importing some of the foreign species destructive to the native oyster. It is time, however, to take precautionary steps before the danger becomes obvious; the history of the struggle against injurious insects and plants teaches us that it is easier to prevent the danger than to combat it later."

These observations did not look very encouraging. However we have found that any place where Olympia oysters have grown Pacific oysters thrive. Due to their larger size and pumping ability, Pacifics will survive where Olympia Oysters will mud in and die.

But let us examine the records. In the November issue, 1934, is an article entitled "California Builds an Oyster Industry", by Harvey McMillin. Harvey is a biologist who for many years has been working with problems of the oyster industry. He is the father of biologist Dave McMillin with the Olympia Oyster Company. This article received broad publicity. In part I quote:

"Native oysters were found in Elkhorn Slough, near Monterey, and were harvested under the direction of the writer. In the same place experiments with seed imported from Japan indicated that this species had commercial possibilities. In February, 1931, seed which had been caught on ropes was obtained from Japan. Short pieces of these ropes were suspended from wooden frames, which were floated on steel drums. The following October, eight months later, harvesting of this seed started after the hurried construction of an opening house and other necessary equipment. The floats covered approximately six-tenths of one acre and yielded about 40 tons of oyster meat. The results surprised even the enthusiastic Japanese seed producers."

A little later another article appeared giving encouraging results in Morro Bay.

"Midway between Los Angeles and San Francisco, just south of Monterey, is Morro Bay. When the tide runs high, the bay is an emerald of Pacific water, circled by white beaches and guarded at its inlet by a 576-foot-high bulge of granite called Morro Rock. But at low tide, the Pacific recedes past the rock to leave 225 acres of soft land where the country's strangest farmers tend their crop-oysters.

"Most of these seabottom farmers' chores must be done when the water is out. They work their fields, spacing the oysters, turning them over on their backs so the flesh grows short and thick, and tossing the oysters-like potatoes -into big harvesting baskets.

"Low tide also is the time for building fences. Not fences to keep the oysters from wandering away-they cannot even turn themselves over-but to keep the crunching jaws of sting rays away from the oysters. The farmers have found that a simple sort of fence, made of posts driven into the mud about a foot apart, does the job. When the sting ray-being wide, flat, and stupid-finds he cannot push through the post fence on even keel, he simply goes away without his oyster dinner, never thinking to tip sideways to get between the posts. Ducks, geese, pelicans and seagulls ignore the oysters, and no disease seems to take a toll.

"Because the water in the bay is too cold for oysters to spawn, the fields must be planted in order to produce. The farmers import their oyster "spat" from Japan and plant it during March. They load their barges with spatimpregnated shells and cruise out over their fields at high tide, shoveling the spat into the bay, where it sinks and grows prodigiously on plankton-the fine growth from decaying moss, grass, seaweed, bird guano and fish life."

In the May edition of "Outdoor California" an extensive article was published. It will be noted that the increase of their seed was rapidly showing up in the output of oysters.

"OYSTERS: booming industry has potential  
greater than in 'good old days'

By H. G. Orcutt, Marine Biologist

"During 1955 all phases of the oyster fishery saw their greatest activity since the "rebirth" of the industry began in 1952. Water bottoms described as state allotments for oyster culture now includes 10,753 acres, compared to only 3,271 acres in 1952.

"With the increase in oyster culturing activity it became necessary to consider serious revision of sections of the Fish and Game Code pertaining to oyster culture. The 1955 Legislature adopted extensive changes which brought the laws up to date."

On December 10, 1955, the Pacific Coast Oyster Growers Association, in Volume 1, Bulletin No. 2, sent out the following information:

"BRITISH COLUMBIA PACKERS LTD. AND  
CHICKEN OF THE SEA INCORPORATED BUY INTEREST  
IN COAST OYSTER COMPANY

"Announcement was made on Tuesday, December 6, by Verne Hayes, of Aberdeen, that two of North America's largest seafoods processing firms have acquired substantial interests in the Coast Oyster Company.

"The announcement stated:

British Columbia Packers Ltd., have purchased a substantial amount of the common stock in the Coast Oyster Company and will be represented on the Board of Directors of said company.

"At the same time Hayes announced, "The purchase by Chicken of the Sea, Inc., of the same amount of stock (as B. C. Packers Ltd.) and that they also would be represented on the Board of Directors of Coast Oyster Co.

"The working agreement provides that British Columbia Packers Limited will have the exclusive sale of all frozen and fresh oysters produced by Coast Oyster Company and that Chicken of the Sea Incorporated will continue to be exclusive sales agent for canned oysters and canned oyster stew.

"The announced stock purchase and agreement will bring directly into the Pacific Oyster Sales Picture two of the largest seafood processing firms in North America.

"Coast Oyster Company will continue to maintain its corporate and canning headquarters in South Bend, Washington. No personnel changes are contemplated and Verne Hayes will continue as general manager of the company."

Unfortunately a large part of the seed shipped in the fall instead of in the spring, as had been the practice, was lost.

In May, 1956, an extensive article on oysters was published in "Outdoor California", in part as follows:

"Shipments of seed oysters from Japan have increased greatly in recent years. During the 1953-54 season 2,234 cases of these young oysters were planted in California bays. The next season saw 10,800 cases imported. From November, 1955, to March, 1956, California oyster men distributed 26,581 cases of seed over their beds. This tremendous increase in plantings has been the result of a large seafood company becoming active in the cultivation of oysters.

"With such a phenomenal increase in seed plantings a corresponding increase in landings can be expected."

As the increase in seed planted, mostly by the Coast Oyster Company, which had been strengthened financially by taking in the two big companies, the areas also were extended. Every inlet or bay that had ever been used for oyster culture was again tried out. In a few years California became one of the largest oyster growing states in the United States. Publicity increased. In the magazine "The Northwest" in its May-June, 1956, issue, published an illustrated article which reads in part as follows:

"The total investment in property, including land, processing, facilities, equipment and live oysters in the process of growing into marketable stock amounts to about \$20,000,000. Growers have spent for oyster seed, or spat, imported from Japan and delivered at Pacific ports, an average of around \$650,000 a year the past few years.

"Washington has 175 commercial growers. There are eight or ten commercial operators in Oregon, at Coos Bay, Tillamook Bay and at Yaquina, and five or more in California. British Columbia has upwards of 25 growers and several small oyster opening houses, with two or three large operators. Ketchikan, Alaska, has one."

On March 23, 1956, the "Humboldt Standard" published an illustrated two-page spread in part as follows:

"Third planting of oysters dropped in Humboldt Bay; 8,200 cases spread here.

.Eighty-two hundred cases of seed oysters have been planted in Humboldt Bay since Friday by employees of Coast Oyster Company. This marks the third planting by this company during the past year in an attempt to start a new industry here.

"We are hopeful that we will be able to have an industry here but it will take another year to 18 months before it will be proven whether a commercial operation can come into being, Vern Hayes, company president, said during a visit here last week.

"So far we have been beset by tremendous winds, bat sting rays, black clawed crabs and star fish, all of which have killed oysters" he said. "If we can surmount these odds we will be able to develop an industry here."

A letter written to me, dated March 23, 1956, from the Department of Fish and Game of California, confirmed the fact that between 1952 and March, 1959 - 84,278 cases of Pacific oyster seed had been planted in California, and that the production during those years amounted to 2,476,367 pounds.

Year	Pounds
1953	161,520
1954	458,493
1955	1,635,067
1956	6,064,117
1957	11,071,422
1958	5,373,058 (as of Sept., 1958)

The California Fish and Game Department under Paul Bonnet, author, in January, 1935, published a report on the California oyster industry, identified as Vol. 21, No. 1. From the first page I quote:

"As there was some confusion regarding the ownership of the water bottoms in some of the bays, a check was made to determine what lands were still owned by the state and what was held under state patents. The old oyster law of 1873 was found to be inadequate and the Legislature of 1933 passed a new law, sponsored by the Division



of Fish and Game, which takes account of and deals with present day conditions."

After general remarks he describes the oyster conditions of each oyster growing area. He gives the history and conditions in each area. Starting with San Francisco, followed by Humboldt Bay and Tomales Bay. Of the latter he comments in part:

"Oyster planting in Tomales Bay started at about the same time as that in San Francisco Bay. At Millerton, on the eastern side of the bay, 17 carloads of eastern oysters were laid out by Weinard and Terry, in 1875. They simply held them there and sold as the market permitted until all were disposed of. Easterns were again planted in 1907 by Eli Gordon, who staked several small beds. Gordon later sold his holdings to J. McNab and G. Smith, who in turn sold to the Pacific Coast Oyster Company, which still owns the beds and holds eastern and Olympia oysters there. The Consolidated Oyster Company put in a small bed at Blakes Landing in 1917, which is now abandoned."

On Humboldt Bay he says:

"The native oyster is indigenous to Humboldt Bay and there are several natural reefs of some extent in the channels and smaller beds on the mud flats. With a little hardening most of the bottom is usable for oyster growing. This has been accomplished, on a small scale, with sand, gravel and shell and these areas have been diked after the methods in use in Puget Sound. The natural reefs have been tonged and the oysters obtained have been laid out on the diked areas as brood stock. Experiments have been conducted with various types of spat collectors, mostly cardboard egg crate fillers coated with cement. In 1933 the set was a comparative failure but in 1934 a very good one was obtained. It was considered desirable in the beginning to limit the activity on Humboldt Bay to the growing of native oysters."

On Drakes Bay the following:

"Drake's Estero is a large lagoon at the west end of Drake's Bay. The entrance is a narrow channel through a sand bar on the southwest side of Point Reyes. Several arms extend far back into sunken valleys and the shores in most places rise steeply from the water's edge. The bottom at the mouth is pure sand, which gradually changes to a soft mud in the upper ends of the arms."

Then Elkhorn Slough, and the lagoons and bays of Southern California, to-wit: Morro Bay, Mugu Lagoon, Newport Bay, Mission Bay, San Diego Bay, Tia Juana River Estuary, and ending with a chapter on "Enemies".

In 1937 and 1938 the same author published two reports on the California Oyster industry. One published in March, 1937, started as follows:

## **"REPORT ON THE CALIFORNIA OYSTER INDUSTRY FOR 1936**

By Paul Bonnet  
Bureau of Commercial Fisheries  
California Division of Fish and Game

"California oyster growing, at present, falls into two categories. In Humboldt Bay the effort is to establish the artificial culture of the native oyster (*Ostrea lurida*) using as a base the already existing natural beds. In some of the other bays which do not contain natural growth of natives, Japanese seed oysters (*Ostrea gigas*) are imported and planted. In our research program, more time is being spent on the culture of the natives as it is imperative for a successful development of this phase of the industry, that a comprehensive biological background be

established. The Japanese oyster is very hardy and so far the technical work in connection with it has consisted, for the most part, of an inspection of the incoming shipments and the designation of suitable areas which seem to possess the necessary environmental conditions conducive to rapid growth, desirable shape and sanitary excellence."

Pacific oysters were tried out in several beds. The report shows that Pacific oysters did very well, but the author was rather reluctant to abandon the native oyster. In summary he concludes as follows:

"The future of the Japanese oyster seems assured as a promising canned product. The species adapts itself to canning by its rapid growth. In the can, it holds its shape well, retains its flavor and remains tender. Because of the extremely rapid growth the Japanese is not as desirable for the fresh trade as some of the slower growing species. A large planting can not be disposed of while the oysters are the proper size and a large proportion may be too large to be readily marketable. A canning operation on the other hand can handle large quantities in a short time and would not be inconvenienced by a great disparity in sizes.

"Plants of Japanese oyster seed have been made in Bodega Lagoon, Drakes Estero, Tomales Bay, Elkhorn Slough and Morro Bay. Some seed has also been planted in San Francisco and Tomales Bays by several oyster companies already engaged in handling imported easterns and natives. The seed is set on old oyster shell and is shipped in wooden cases. The expectation, from a case, with an average set, is 10,000 marketable oysters. The total imports of seed have slowly increased during the last few years.

"Imports of Japanese Oyster Seed:

1933	1,295 cases
1934	1,031 cases
1935	4,902 cases
1936	3,725 cases"

In the next report, published in January, 1938, the reports were very good for most locations. This report created much enthusiasm, especially with those in the industry. From that time on, as I have shown before, the industry has grown in leaps and bounds. The Pacific oyster was adopted as "The Oyster" for California waters.

### **British Columbia and Alaska**

I shall treat these two areas together. Statistics have so considered them that way. If the reader will again turn to table I-A it will be observed that they have been so treated. This has been done, I presume, because of the fact that the shipments of seed to Alaska have been relatively small.

Between 1935 and 1960 together they shipped 45,634 cases of seed. Perhaps about 3,000 cases were planted in Alaskan waters.

In their April, 1961, issue Of "WEST COAST FISHERIES" published the following news item:

"JAPANESE TRANSPLANT oysters, which have grown so well in Washington, Oregon and California waters, also thrive in British Columbia beds, according to C. R. Elsey of the Nanaimo station of Biological Board of Canada. Elsey states that Japanese seed was planted in a number of localities during 1931 and that it has demonstrated its ability to grow under a variety of conditions, including those which are said to be unsuited to culture of other species."

Dr. C. R. Elsey, therein mentioned, about that time became a member of the Pacific Coast Oyster Growers

Association, and ever since has been a member of that association, served as a member of the Board of Trustees for many years. He served also as President for several years. He was a biologist, and ranked high in his profession. He was sent to Japan to help solve some of the problems connected with the growing, packing, and shipping of the seed we were purchasing from the Japanese. He became affiliated with "British Columbia Packers, Ltd.", which company purchased a substantial interest in the Coast Oyster Company of South Bend, Washington, owners of oyster beds in Washington, Oregon and California. The Pacific oyster industry owes much to Dr. Elsey for his contribution to the rapid growth of the industry on the Pacific Coast.

There has been, through the years, an average of from ten to fifteen British Columbia oyster growers who belonged to the Pacific Coast Oyster Growers Association.

Although I have visited several of the oyster beds at Crescent Bay, Ladysmith, and several other bays, the names of which I have forgotten, yet I have no dependable information as to the number of acres under oyster cultivation.

In addition to the seed they have purchased from Japan there is a narrow inlet called Pendrell Sound which seems to have conditions favorable for the setting of seed. One Loyal Young of Bliss Landing, representing the Pendrell Sound Oyster Company has for several years carried on a Pacific Seed Operation. This, no doubt, has added many thousands of gallons to the production from oyster seed from Japan.

### **Summary**

I have attempted to trace the path and rapidity of advance taken by the Pacific oyster on the Pacific Coast from Alaska to Southern California. Perhaps there is no such history in the annals of time where a natural product of the sea has been transferred to another far distant country with such success. It has supplied thousands of people with employment. It has provided food of good quality to many lovers of oysters throughout the nation, both in times of peace and war. The industry has received many millions of dollars for its product. The people of Japan have received millions for the seed we have purchased from them. I am proud of the part I have had in the privilege of assisting in carrying on this work. It has given me an opportunity to work with many fine people, as has been made manifest through this entire book.

**APPENDIX A**  
**THE PACIFIC OYSTER AND POLLUTION**

In October, 1957, I had the pleasure of writing and having published a book entitled "THE RISE AND DECLINE OF THE OLYMPIA OYSTER". This was done at the request of the Olympia Oyster Growers Association at the Golden Anniversary banquet of said association.

In that book is an appendix entitled "THE OLYMPIA OYSTER AND POLLUTION". It contains a rather complete coverage of the decline of that industry almost to the point of extermination. In fact, nearly all Olympia oyster growers, including myself, abandoned hope of relief so far as Olympia oysters were concerned. Fortunately it had been found that the Pacific oysters would tolerate more pulp mill pollution than its little brother, the Olympia oysters. Large sums of money had been expended in leveling and diking their beds, which was not necessary for the more hardy "Pacific". Therefore large quantities of Pacific oyster seed from Japan were planted in Southern Puget Sound.

Many of the problems were discussed in said book, "RISE AND DECLINE OF THE OLYMPIA OYSTER". The problems also arise in the Pacific oyster culture. Let us examine the authorities.

Harvey C. McMillin, aqua culturist, who had been on the staff of the Department of Fisheries in the earlier days and participated in the study of this subject in the early 1930's, was again with the Department of Fisheries in 1957, under Milo Moore, director. He was assigned the work of making a further study of pollution conditions in Padilla and Samish Bay.

Harvey is the father of Dave McMillin, also a biologist, who has been with the Olympia Oyster Co., located in Oyster Bay, for some years. I had the pleasure of working with Harvey both at Oyster Bay and at Samish Bay.

Harvey made his report to the Department of Fisheries on November 25, 1957. It covers the subject so well that I am going to quote from said report rather fully.

**Padilla and Samish Oyster Beds**  
Harvey C. McMillin, Aquaculturist  
Department of Fisheries

"Padilla and Samish Bays were natural oyster grounds before the coming of the white man. Eastern oysters were later grown in Samish Bay as long as seed was available. Since 1921 Pacific oyster seed transplanted from Japan has been grown in these areas. At first, the culture was on an experimental basis. As this type became marketable in the fresh state, the industry expanded. With the introduction of steam packing in cans the market for Pacific oysters became practically unlimited and the industry spread to the entire tideland area of the state.

"To a large extent Samish Bay oysters were sold in glass jars or in tins on the fresh food market. Padilla Bay oysters were developed primarily for steam process canning but they were in some measure sold on the fresh market. The Padilla Bay product was affected by pulp mill pollution quite early in its industrial history. Only at such times as the Anacortes pulp mill is not in operation and when pollution from the Bellingham mill is limited will the oysters mature in normal periods of time and become fat enough to be marketable. When the mills are in operation the oysters grow slowly if at all and never reach marketable size and condition.

"Samish Bay has a thirty-year's history of successful Pacific oyster culture. A part of that time, particularly within the last fifteen years, the oysters have been affected by pollution. The production per case of seed in terms of gallons

of marketable oyster meats has gradually declined. Oyster production has been affected in two ways, the growth of the seed oysters has been reduced and it has taken longer to grow to commercial size, also the quality of the meat has suffered. Formerly, seed oysters grew to market size in two years and measured 80 to 120 to the gallon. At the present time, five-year-old oysters are being opened and they run 130 to 200 to the gallon. These small oysters are dark in color and are too thin to be sold to discriminating buyers. The mortality is high on the beds and the loss is severe over the years of the growing period. This mortality is not a sharp loss which takes a large percentage of the oysters within a short period of time, but it is a gradual loss due to a continually high mortality that is not generally found on other beds.

"Pacific oysters tolerate wide ranges of salinity and temperature. The environmental factors encountered in Samish and Padilla Bays are well within these ranges. Variations in natural conditions are not responsible for the conditions observed in Samish and Padilla Bays.

„Extensive transplantings on an experimental basis and in industrial salvage operations have been carried on. If oysters from Samish or from Padilla Bay are transplanted to Canada, Lower Puget Sound, or to Hoods Canal, they rapidly recover normal condition and begin to grow. Experience shows that about eight weeks is the time necessary for the oysters in the new locations to become marketable on the same basis as oysters grown regularly in that particular bay.

"Results of transplanting are particularly striking in the case of oysters moved to Similk Bay from Samish Bay and from Padilla Bay. These areas are close together except that Similk Bay is on the south side of Fidalgo Island and receives tidal water from Rosario Strait through Deception Pass and the upper end of Skagit Bay which is not seriously contaminated with pulp mill effluent.

"These transplant demonstrations prove that climatic conditions are not responsible for the unfortunate conditions in Samish and Padilla Bays. Also the resumption of normal growth and the improvement in quality of the transplanted oyster prove that there are no oyster disease epidemics adversely affecting the oysters in the formerly productive beds of Samish Bay and Padilla Bay.

"Pulp mill effluent in lethal concentrations has been found over the oyster beds in both Padilla and Samish Bays. In front of the oyster grounds the open bays are heavily polluted in such concentrations as to give color to the water and to be visible to the eye.

"Under the general conditions which exist in local waters Pacific oysters are hardy and mortality is very low during the years of growth. Even among very old oysters which are far larger than those usually marketed, the death rate is negligible. Occasionally, Red Tide organisms kill a larger percentage of oysters in a limited area. Red Tide losses take place in the summer and fall within a short period of time, and the oysters affected are usually growing rapidly and in excellent condition. The loss caused in this way comes on quickly and is sharp in regard to time limits and restricted to a small area within one bed or within a small plot where the organisms can be seen in the water. The danger of Red Tide losses can be predicted from weather data and the cause and effect can be observed while in progress.

"Mortality from Red Tide infestation is in no way related to the conditions observed in Padilla and Samish Bays. Pollution damage is a steady, continual process which is in progress over long periods of time and is observed by the growers, if observed at all, as a result of comparisons of production records, growth rates, mortality rates, and production per box of seed planted or per bushel of seed transplanted. The oysters do not come into good condition during the usual marketing season. The opening houses have trouble with their workers and the retailers encounter sales resistance. Pulp mill effluent does not kill oysters outright as does Red Tide infestation. It works slowly as a chronic irritant or poison which so affects the oyster that it cannot live normally and carry on its life processes as

it does in clean water.

"The pulp mills have developed the Pearle Benson test for sulphite waste liquor. It may not be a perfect measuring device but we know that there is a high correlation between known contamination of sulphite waste liquors, Pearle Benson test readings and the health of our fish populations. For practical purposes the test readings based on dilutions of sulphite waste liquor containing 10 % solids give us reliable data to measure pollution. Under optimum conditions in the laboratory 13.4 parts per million of liquor in sea water causes high mortality to oysters in a short time. By analysis of this data it is indicated that four parts per million will also cause increased mortality within a comparatively short time. A level of 2.3 parts per million will cause measurable disturbances in the life of food organisms.

"The condition of Samish and Padilla Bays' oysters may result from high concentrations found occasionally over the beds or from low concentrations which have occurred continually in recent years. Based on the Pearle Benson test, as we now use it, the concentration of sulphite waste liquor should certainly not exceed two parts per million over the oyster beds at any time and one part per million, or less, would be a more realistic limit.

"In addition to the oyster problems with which we have been dealing, it is well known to all that sulphite waste liquor, when added to sea water, brings about a loss of dissolved oxygen. This makes it impossible for free living organisms such as salmon, crabs, herring and shrimp to survive although the toxic effects of the liquor may not be sufficient to kill by poisoning. In order for our fish to survive, we must be assured of five parts per million of oxygen. This is a recognized standard in biological investigations where active animals carry on their normal activities. Therefore, it is highly important for us to fix a minimum limit of five parts per million of dissolved oxygen in any public water in which fish are known to exist. This minimum should be fixed and enforced in all fishing, rearing, feeding, and spawning areas, particularly in river mouths and estuaries which form a part of migration routes.

"Existing pollution permits seems to have been ignored by the pulp mills. Our fish life is suffering extensive damages. Fingerlings are lost during migration to the ocean and spawning fish are prevented from their normal return to their parent streams. The existing conditions are intolerable and the only solution yet presented is the barging out of the polluting material in such quantity that will leave our public waters with oxygen sufficient to maintain fish life and free from such lethal materials which kill our oysters and disturb its food organisms."

Shortly before the above report was published, to-wit in September, 1957, a further report was published by the Department of Fisheries, Milo Moore, Director. This was a survey of the Washington State Pulp and Paper Mill Pollution Problems. I quote:

"Certain pollution conditions, brought about through the expansion of valued industries within our state, have been allowed to exist and have excited the interest of a large segment of our citizens. In answer to numerous inquiries as to the effects upon marine resources due to the discharge of sulphite and sulfate mill waste, the following information has been prepared.

"It has long been the feeling among the ordinary residents of the State of Washington to pride themselves upon the wonderful natural resources, scenic beauty, and the outstanding recreational values our state has to offer. Our state mottoes have virtually become "Keep Washington Green" and "Keep Our Waters Clean". One out of every three Washington citizens has indicated fishing to be his favorite outdoor pastime. In addition, every child looks forward to swimming and vacationing at the beaches along our shores during the summer vacation.

"Along with the fact that our citizens show a tremendous pride in the preservation of all the natural beauty and resources our state has to offer, there is an evergrowing feeling that our governmental and industrial planners have

not followed a direction that would wisely preserve these interests.

"Along with the development of forest products came the expansion of what is now one of the state's principal industries, the pulp and paper enterprises. These operations, of necessity, require a large volume of clean fresh water in the manufacture of their products. This water is returned to the public waters of our state in a grossly polluted condition. Over 400,000,000 gallons of highly concentrated pulp and paper mill waste water are released daily into the waters of the state. Such waste has contributed to a condition that has changed the entire natural environment of the areas adjacent to pulp and paper mill operations.

"Almost the entire population of our state is critical of this situation that has been allowed to exist, in spite of laws that require correction. The pulp and paper manufacturers have not exercised the same care in correction of their pollution problems as they have shown in replacing the forests. There is an equally important need to protect our marine resources from the harmful effects of pulp and paper mill waste which has increasingly become a menace to our fishery and recreational resources, and the conditions brought about by these industries today is such that fishery resources are materially affected in many areas of our state.

"The purpose of this brief report is to inform those responsible and interested in pollution problems. This report contains a summary of facts and conclusions resulting from investigations and studies carried out over a period of 30 years by the Washington Department of Fisheries at an estimated cost of one million dollars. It is hoped by these facts and investigations now in progress that a fair appraisal of the pollution problem as it relates to fisheries will be determined."

This is followed by a graph showing the pulp production trends in Washington, 1925-1954. This shows that it increased from 100,000 tons in 1925 to 1,000,000 tons per year in 1954. Then the report continues in part as follows:

#### "EVIDENCE OF DAMAGE BY PULP MILL POLLUTION

1. Fish kills observed in Grays Harbor and Port Gardner. Many fish kills can escape detection, since dead fish sink to bottom and injured fish are eaten by predators.

##### *"Published information on effects of sulphite waste liquor"*

"Two published reports are available specifically dealing with the effects of sulphite waste liquor on Olympia oysters. One of these also makes reference to experiments on Pacific oysters. Hopkins, Galtsoff and McMillin (1931) conducted both laboratory and field research and concluded that the Olympia oysters in Oakland Bay were seriously affected by effluent from the Rayonier mill at Shelton. In short-term tests they determined that 440 ppm affects the feeding time of Olympia oysters and causes death over long periods of time. Galtsoff, in the same report, showed that 200 ppm sulphite waste liquor reduces the average pumping rate of Pacific oysters. McKernan, Tartar and Tollefson in Biological Report 49-A of the Washington Department of Fisheries (1949) reported on investigations into causes for the decline of the native oyster industry of the State of Washington and concluded that the overall decline in production (Figure 3) and yield of meat per sack of unshucked oysters is probably due to the effects of sulphite pulp mill effluent from the Rayonier mill at Shelton. In laboratory tests they determined that sulphite waste liquor concentrations as low as 13 ppm causes substantial mortality over a long period of time. A recent statistical analysis of these data by C. O. Junge shows an estimated 12 percent kill of Olympia oysters in a sulphite waste liquor concentration as low as 4 ppm.

##### *"Present knowledge on effects of sulphite waste liquor"*

"Positive proof that sulphite pulp mill effluent is harmful to marine life is directly observable by the absence of

teredos, barnacles, mussels and most other non-mobile invertebrates in the vicinity of pulp mills located on salt water. Our own observations during the past year in Grays Harbor, Port Angeles, and south Puget Sound have shown oxygen values to be depressed below 2.5 ppm at certain times of the year, principally in the summer."

By this time the pulp mill organization was getting worried. All the earlier reports by biologists, both Federal and State, agreed for the most part as to the effect of sulphite liquor on marine life, including oysters, clams and fish. In the early 1930's such authorities as Dr. A. E. Hopkins, biologist for the Federal Department of Fish and Game; Federal biologist for the same department, Paul S. Galtsoff, as well as the biologists for the State of Washington Fish and Game Department, made and filed their reports. These reports were assembled and published for fishing and sportsmen's organizations as well as the industries interested in oysters and fish, both commercial and sports fishing.

So the pulp mills organized and took the offensive. It was led by Vinton W. Bacon, executive secretary of the Northwest Pulp and Paper Association. He seemed to put the most emphasis on the economics involved. He addressed a letter to the tri-state council and the press gave it publicity. To quote briefly from one paper:

"Bacon told the tri-state council of pulp and paper workers that the problems of fisheries, oysters and the pulp industries should be kept in 'proper perspective.'

\* \* \* \*

"The oyster industry, if injured by pulp and paper waste products, should be protected, he said. But neither the oyster industry or any other fishery business should 'wrongfully accuse' the pulp and paper business.

"A portion of the oyster industry, whose annual product is valued at about \$300,000, is jeopardizing the state's pulp and paper industry which in 1958 had products valued at 439 million dollars and employed 14,785 persons, he said.

"This is an extreme case of the tail trying to wag the dog,"

This attitude of the pulp mill group aroused the interest of another segment of our citizens-those who take pride in the God given rights of the people of this state to the natural resources of this State of Washington. The oyster, clam and fish organizations led in attacking this attitude. I shall quote from one published answer:

"Analysis by Pacific Coast Oysters Growers' Association of statement by the Northwest Pulp and Paper Association to the Pollution Control Commission on February 4, 1958, regarding water quality standards recommended by the Director of Fisheries."

"This statement concerns the Director of Fisheries' proposal that sulphite liquor concentrations be limited to three parts per million beyond one half mile from point of discharge, and that dissolved oxygen concentration shall not fall below five parts per million one quarter mile from point of discharge; that wastes which tend to collect and remain in bays, inlets, lakes, rivers or streams shall either be purified or barged or piped or otherwise transferred to areas authorized by the Commission."

"Contrary to the Pulp Association's statement, these limits must not be exceeded in areas where our fish are either propagated or produced. The attached letter from Stanford Research Institute lists many reports of independent qualified biologists and scientists on this matter. The Director of Fisheries' proposed criteria was accompanied and supported by several statements by unbiased biologists who have spent ten to thirty years in the study of this question."

"A recent practical test of sulphite liquor damage was given by the closure of the Shelton pulp mill fifteen months ago. This mill evaporated 80 % of its liquor when operating. Conditions prior to the shutdown were documented



by hourly samplings, which have been continued since the shutdown, thus giving a complete picture of conditions before and after the removal of sulphite waste liquor from the receiving waters.

"Prior to the shutdown of the Shelton pulp mill the Olympia oyster had become virtually extinct. The area was abandoned for many years by the spawning herring. Small shrimp and other marine life had disappeared.

"Since the mill shutdown, normal conditions have again returned to this area and all types of marine life are flourishing once again. Herring, shrimp and other marine life are again in evidence in abundant quantities. The very hardy Pacific oyster is growing beyond expectations.

" It must be pointed out that no other change in the environment of the waters in this area took place except the removal of the small percentage of SWL (under 20 %) which escaped with the wash water and was not evaporated.

"Without question, oysters cannot be produced commercially in areas which have the toxic effect of 3 ppm of sulphite liquor. Salmon, on the other hand, can tolerate the toxic effect of higher concentrations of sulphite liquor, but they cannot tolerate the oxygen deficiency caused by the oxygen demand of sulphite liquor in the vicinity of a pulp mill.

"Pulp mills using the sulfate process have eliminated most of their pollution by evaporation and recovery of chemicals. A similar process, known as the magnesium-oxide process, was developed for the sulfate mills thirteen years ago, but has been adopted by only two mills in this state the Weyerhaeuser plants in Longview and Cosmopolis. The process is used in all Alaska pulp mills and some pulp mills in New England.

"The pollution law says: "The Commission shall \* \* \* adopt \* \* \* regulations and standards consistent with known, available, and reasonable methods of preventing pollution."

"We are not particularly interested in the fact that 50 ppm of sulphite liquor did not kill oysters, for the reason that we still have '900,000 bushels of oysters in Padilla Bay which remain in an unmarketable condition, and which have not died in the concentrations of liquor in the area. As we said before, the problem is not the mortality of the oyster; although in its emaciated condition in the presence of SWL its mortality rate naturally would increase. Our main complaint is that the remaining oysters are unmarketable and therefore the industry in such an area must die, with very great damage to the economy of the State of Washington. This is also true of the clams and the crabs.

"The Pacific oyster industry was based entirely on the development of methods for getting a live seed oyster across the Pacific on a three weeks' trip. The tremendous expansion in this industry is due largely to the fact that it is a superior canning oyster as compared to the Eastern or Gulf oyster. The proof of that statement is the fact that some 2 1/2 million dollars worth of canned oyster soup, a combination of milk and oysters, is sold clear across the United States, with a very large volume going into the Eastern oyster territory.

"Prior to the War the Shelton-Olympia area had been devoted almost entirely to the production of Olympia oysters. The production of Pacific oysters as shown in Figure 3 for the period from 1930 to 1945, had largely come from North Sound oyster growing areas of Samish Bay, Padilla Bay, and Similk Beach. Then, as the Olympia production went down, the Olympia growers started planting some Pacific oysters as a matter of survival. Seed planting of North Sound and South Sound were practically equal after the War until the last two or three years.

"We submit that the large scale demonstration in the Shelton area of the definite damage to shellfish, under natural conditions with none of the errors possible in a laboratory experiment, is the final answer to the toxic effect of more than 3 parts per million of sulphite liquor in the water over the oyster beds."

On June 14, 1958, Mr. R. H. Bailey of the Padilla Bay Oyster Company, gave publicity to the following in part:

"Mr. Bacon prepared a brochure which was presented at the February 4th meeting of the Pollution Commission. Several half-truths were set forth with implications far from the facts:

1. There have been great variations in production of oysters in Willapa Harbor where there are no pulp mills.

Answer: The great variation came when seed supplies were completely shut off during World War II. The Pacific oyster industry is based on the importation of a half million dollars worth of seed oysters from Japan each spring.

2. Oyster production has increased 16 times since 1930.

Answer: There was no oyster industry except the few beds of native or Olympia oysters near Olympia, Washington. Successful methods of importing live oyster seed from Japan made possible a new oyster industry which had no relation to the little native oyster. The Pacific oyster's name is "Gigas" or latin for giant. It is the finest canning oyster in the world which permits reaching Eastern markets. The connecting up of this millions of gallons of oysters with the few Olympia oysters produced in 1930s and designating this as an increase of 1,600 % is to put it mildly-not factual.

3. Instead of giving North Sound production of oysters and its decline to practically nothing, Mr. Bacon shows a slight increase by giving figures for all of Puget Sound. Here again, the increase was due to Olympia oyster growers abandoning their Olympia oysters and planting the Pacific or giant oysters which can tolerate more pulp liquor than can the small oyster. The result was an increase in oyster production in South Sound which when coupled with the lack of hardly any production in North Sound-still showed a slight increase.

Question: Is this and other oyster statistics not a studied evasion of the truth? Technically true but completely dishonest in its insinuation and simply a clever deception.

June 14, 1958

R. H. Bailey"

In the latter part of 1958 the Department of Fisheries issued the result of a study as to condition or fatness of oysters in the different locations in the State of Washington. It covered a period of over two years.

"The following tables present the data for the various areas, each being headed by the location, year of planting, and species of oysters. The data are tabulated by month with the yearly average at the bottom. In instances where partial years are used for the yearly average, the figure is not directly comparable with averages based on an entire year. Peaks in the data that occur during the months of June, July and August are due to gonad development (build-up of spawn). The range of values is generally as follows:

Above 10	Excellent
8-10	Good
6-8	Fair
Below 6	Poor

"From the data, certain trends with respect to fatness are obvious and are as follows:

1. Samish Bay, Blanchard, is the poorest Pacific oyster station and within the limited time of observation has shown no improvement.

2. Similk Bay Station is producing the best Pacific oysters, followed closely by south Puget Sound and then Grays Harbor.
3. Based on the 1956 Pacific oyster year class, south Puget Sound stations have shown improvement during 1958.
4. Willapa Harbor Pacific oyster stations have been undergoing continued decline.
5. General improvement in fatness has occurred in all south Puget Sound Olympia oysters.

**NORTH PUGET SOUND**

**Crassostrea Gigas**

<b>Samish Blanchard 1956 Year Class</b>	<b>Padilla Bayview 1954 Year Class</b>
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	<b>1957</b>	<b>1958</b>	<b>1957</b>	<b>1958</b>
January		4.0		5.8
February		3.9		6.3
March		3.8		6.8
April		5.4		7.3
May		6.4		8.6
June		7.0		10.1
July		3.9		9.3
August		4.5		6.9
September		3.0		6.5
October	2.2	3.6	7.7	7.8
November	4.4	3.7	8.4	7.0
December	4.7	3.6	8.1	5.6
<b>Average</b>	<b>3.8</b>	<b>4.4</b>	<b>8.1</b>	<b>7.3</b>

**\*Similk**

**(Samish Transplants)**

<b>Similk 1956 Year Class</b>	<b>1952 Year Class</b>
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	<b>1957</b>	<b>1958</b>	<b>1957</b>	<b>1958</b>
January		10.3		13.0
February				3.0
March		11.8		3.6
April		11.9		9.3
May		11.3		9.4
June		12.2		9.1
July		17.0		9.9
August		17.0		9.5
September		10.9		11.5
October		12.88	8.9	13.5

November	12.9	10.9	1.6	10.9
December	11.3	14.2	6.9	10.8
<b>Average</b>	<b>12.1</b>	<b>12.7</b>	<b>5.8</b>	<b>9.5</b>

In late 1958 Governor Rosellini provided the Pollution Commission, out of his emergency fund, funds to do something about it. Mr. Harold E. Miller, Director of the Pollution Control Commission, entered an agreement with Gordon Gunter, Consultant Biologist of Ocean Springs, and Jack Edward McKee, Civil and Sanitary Engineer of Pasadena, California. This report was completed and transmitted as of date February 25, 1960. It is entitled "On Oysters and Sulphite Liquor". It is a very complete coverage of all authorities on the subject. It is 93 pages in length. It is now known as the Gunter-McKee Report. It will be referred to later but it is too long to copy herein. I suggest that any interested reader should request a copy from the Washington Pollution Control Commission.

The report was received with approval as to its thoroughness, but not entirely with the conclusions reached or the recommendations. On July 21, 1960, the area of agreement between all concerned was adopted by the Commission. On the same date further action was taken.

### STATEMENT OF PROCEDURE

"On December 18, 1958, the Pollution Control Commission, with approval of the oyster industry and the pulp and paper industry, entered into a contract with Doctor Jack McKee, Professor of Sanitary Engineering, California Institute of Technology, Pasadena, California, and Doctor Gordon Gunter, Director, Gulf Coast Research Laboratory, Ocean Springs, Mississippi, to provide a report on the involved problem of many years, namely, the effect of sulphite waste liquor on oysters. The two scientists immediately launched a program of complete review and evaluation of all technical information available from all sources within our State, and technical data available elsewhere providing pertinent information on the subject.

"The report has been given very thorough distribution; several meetings and the filing of Resolution 60-2 have enabled every interested person in the State to become very familiar with the recommendations providing for the adoption of interim standards with the tolerances to be allowed by specie. Areas known to be of commercial oyster production are being defined, and several areas of research are being recommended to be carried on jointly with the monitoring program in order that the known factors pertaining to this problem might be defined. This will eventually provide the Commission with the necessary technical information to arrive at permanent standards, thereby complying with Sections 11 and 13 of the pollution control law of the State of Washington.

"Since the filing of Resolution 60-2, the Commission and the staff have held several meetings with representatives of the oyster industry, pulp and paper industry, and the general public, with the idea in mind of developing an acceptable program of proceeding with the recommendations of the report. It must be realized that this program is for the purpose of obtaining a solution to this involved problem and is not to be construed as an all-inclusive program of protection for other water uses. The amended filing that is being considered at this hearing today, if adopted or amended, will become the policy and program of the Pollution Control Commission, effective in 30 days. The Commission, by this filing, will not relax any standards of water quality established by previous permanent permits, and it will continue to the policy of the Commission to arrive at permanent permits on the basis of complete protection for all water uses in each area of the State known as receiving waters.

"While the mill at Shelton is not operating, and because of the past history of the area being identified as most critical and involved, and adding the complication of state-owned reserves, the following specific procedure pertaining to the South Sound is hereby adopted: the areas and standards as defined in Section IV of the Rules and

the requirements of Permanent Permit No. 779 shall apply.

## **PROVISIONS OF PERMIT NO. 779**

### **Pertaining to Statement of Procedure**

"Failure to comply with any of the foregoing or following conditions shall be cause for revocation of the permit in the manner provided by law.

- a) When the following factors are found to be attributable to the operations of the permittee: at the outer harbor area to the North and East of the outer Harbor line at Shelton, the dissolved oxygen concentrations are found to be less than 5 parts per million; pH range is found to be outside of 6.5 to 8.5, or when more than a negligible amount of bleached pulp fibers are found; or when a substantial depressive effect is found due to sulphite pulping wastes upon the seasonal normal densities and diversities of plankton and related forms of aquatic life. (The seasonal normal densities and diversities of such forms are to be evaluated prior to the resumption of pulping operations).
- b) When, at the State monitoring area near Skookum point there is a buildup of fiber sludge deposits attributable to bleached pulp fibers; or when it is found that the permittee has added more than an average of 6 parts per million of indicated sulphite waste liquor concentrations, or has added more than a maximum of 13 parts per million of indicated sulphite waste liquor for any single sample as measured in the waters of Hammersley Inlet at the State monitoring area near Skookum point. (Survey averages are to be based on a minimum of four sets of six samples each with each set to cross-section the channel during outgoing tides during any single day)."

### **NOTICE**

"At 9:30 A.M., July 21, 1960, the Pollution Control Commission will meet in House Hearing Room 2, Legislative Building, Olympia, Washington, to enact rules concerning allowable concentrations of sulphite waste liquor (PearlBenson indices) in waters overlying beds used for the growing of oysters. Following are the rules to be enacted:

#### **I. STANDARD**

- A. In waters overlying beds used for the growing of *Ostrea lurida*, Pearl-Benson index attributable to pulp-mill wastes shall not exceed 10 during the months of April through October, and shall not exceed 20 during the months of November through March.
- B. In waters overlying beds used for the growing of adult *Crassostrea gigas* (but not *Ostrea lurida*), the Pearl-Benson index attributable to pulp mill wastes shall not exceed 40 during the months of April through October; and shall not exceed 80 during the months of November through March.
- C. In waters overlying areas where spat of *Crassostrea gigas* are normally collected in commercial quantities, the standards for *Ostrea lurida* shall apply during the months of April through October.

#### **II. APPLICATION OF STANDARDS**

- A. For a given set of sampling stations in a prescribed geographic area, the Pearl-Benson indices for any one day shall be averaged arithmetically. In no case shall this average exceed the standard.
- B. Over a prescribed period of time, all Pearl-Benson indices shall be considered as individual values, of

which not more than 20 per cent shall be allowed to exceed the standard. The periods of time shall be one month during the period from April through October, and five months during the period from November through March.

EXCEPT:

C. In waters overlying areas where spawning and spat collecting of *Ostrea lurida* and *Crassostrea gigas* normally occur in commercial quantities, the standard shall not be exceeded in any single station value during the period from April through October."

Previous to this, on May 18, 1950, another meeting had been called by the Commission. All interested persons had been invited. Thirty-five persons besides the Commissioners were present. A verbatim transcript of the hearing was made. There were many speakers. Every phase of the subject was presented by speakers representing both sides. The transcript covered 31 pages. I will only quote a small part of it.

"Mr. R. N. Steele: Gentlemen and members of the Pollution Control Commission, my message is very brief. I represent the Rock Point Oyster Company. Gentlemen: After reading the report by Messers Gunter and McKee, I feel that I must compliment these gentlemen for their excellent summary of the material at hand. The tying of this information together has been a great service and should give everyone a better knowledge of some of the facts.

"The report brings out that sulphite waste liquor does affect Pacific oysters, Pacific oyster larvae, and several species of clams, as well as *Olympia* oysters and *Olympia* oyster larvae. It also brings out that very large pools of sulphite waste liquor exist in Bellingham Bay most of the time. However, the conclusions and recommendations of this report are not based on the real problem of our Pacific oyster industry. The conclusions have been based on mortality of the Pacific oyster and not condition factor. This is our problem, condition factor. I agree that oysters can survive in over 40 parts per million as they have in Samish Bay; however, the condition of these oysters changes with the concentration of sulphite waste liquor. When north winds blow, concentrations go up and oysters become poorer. South winds over a period of time hold the liquor in Bellingham Bay and concentrations improve. Careful monitoring of oyster and clam areas will not help if sulphite waste liquor concentrations are not reduced at the mill outlet.

"I feel that the effluent must be monitored and limited at the mill rather than the outlying bays. It is too large a job to trace effluent with wind, tide, and time as variables of concentration.

"I strongly urge the Commission to require 'the best known means' for pollution abatement, and require a reasonable reduction at the mill site. Thank you."

"MR. BOB BOWERS: If there appear to be omissions, discrepancies, or contradictions within the text it must be assumed that they are the result of the condensation of the voluminous material examined. Certainly the ability, sincerity and integrity of Doctors Gunter and McKee in making a conscientious, unbiased, and objective examination are above reproach. Their conclusions and recommendations must be accepted in the same light.

"There can be no argument with the conclusions reached. They are simple and direct. In brief they confirm:

1. That the Pollution Laws of the State of Washington are adequate if enforced.
2. That environmental and natural factors are not the cause of the oyster decline in Washington State.

- 3, That SULPHITE WASTE LIQUOR IS POLLUTION.
4. That it does adversely affect clams, oysters, and oyster larvae.
5. That it does reach oyster growing areas located near pulp mills.

Further comments would be repetitious and superfluous and could only be injected to cloud the issue."

MR.MIGDULAS:

"The whole controversy over the total pollution problem can be summed up in two ways:

1. There is a group on one side that is trying to make the standards as easy on themselves as possible financially.
2. There are the other groups on the other side of the fence, conservationists, sportsmen, and the general public who want to conserve our God-given natural resources for themselves and future generations to enjoy.

On page 79 of the Gunter-McKee report there are listed mild numerical standards or recommendations on sulphite waste liquors discharged into the public waters of our state.

The recommendations in the Gunter-McKee report will have to be considered completely inadequate when compared to the recommendations by the Department of Fisheries dated January 7, 1958, and as presented by the Director of Fisheries on February 4, 1958, before the Pollution Control Commission on that day.

The Tacoma Sportsmen's Club goes on record that the eventual goal to clean up pollution of sulphite waste liquor and other pollutants dumped into our public waters must be as recommended by the Director of Fisheries on February 4, 1958, before the Pollution Control Commission at its hearing on that date.

Over the signature of each member of the Tacoma Sportsmen's Club on the back of his membership card is the following pledge:

" I pledge as an American, to conserve the natural resources of my country, its soil, minerals, forests, waters, and wild life . . . ",

When a member is inducted into the Tacoma Sportsmen's Club he takes the following pledge before the other members:

". - - I shall jealously guard the heritage which has been entrusted to me and my generation, and shall endeavor to pass that heritage on to future generations, unsullied and unspoiled. To accomplish this, I shall fight vigorously against pollution of air and water, and against destruction and despoilation of soil, forests and wild life, I shall encourage those who practice conservation by replacing that which they take, and oppose those who ruthlessly exploit our natural resources for selfish gain . . . "

"We respectfully submit that the members of the Pollution Control Commission who should consider a public office a public trust can do no less."

MR. BAROVIK:

"We are priding ourselves on the tourist trade, but we are destroying the most important attraction and resources that we have to offer to the tourist. It's our beaches, our clams, our oysters, our fishing. Now, gentlemen, I think that you are big enough, smart enough, intelligent enough that I would recommend to the Pollution Commission, and I said this once before that we got the certain laws, the statutes in the State of Washington, the Game Department, and others that cost us money as taxpayers; I am speaking as a taxpayer today, right this moment. Our fisheries director, biologists, and scientists at the University of Washington, find that we have a pollution in these waters, and I say that it is the duty of Mr. Art Garton and his staff to enforce that law and not be a-passing the buck, and I say that if they are going to pass the buck let's get rid of this Department and save the taxpayers some money, because if it is not enforceable, then why is the Department passing the buck back to the taxpayer when the taxpayer is paying the bill to enforce the laws of the State of Washington and that's what, gentlemen, that has been happening. Why should we pass the buck, why shouldn't we face the fact? I think that if the pulp mill interests would come along with the decent, respectable sportsmen of our State, the Fisheries and the Game Departments, and lay our cards open and see if we could solve this problem mutually and would probably even help the industry. I don't want to hurt the industry, God knows that, but at the same time the industries are doing a greater damage than their assets; then, I say to heck with the industry. I am going to make just one more statement, and then I am going to leave. This reminds me of a fight that we had in 1933 or '34 with the fish-pack industries. It seems to me that it is exactly the same pattern. They wasn't hurting the salmon, they wasn't doing any damage! When we tried to ask them just a little simple increase in the mesh so that the little feller could go through after they follow the big school into the traps, they have refused; they have fought us to a standstill!

"They beat us at every turn at the Legislatures-just like we were beaten this year down there. I spent 60 days for information, with no salaries and not paid by anybody, just as a citizen, so we had to result to an initiative, to which many of you it is well known-Initiative No. 77. And we shoved it down their throats because they would not yield or give the cooperative means to solve the problem mutually. And I said, as I have said before, if our Pollution Commission don't take action, I am pledging \$1,000 out of my pocket to start an initiative against this, and enforce this by the people. It means just that much. It means that the people will take care of it if you don't want to take care of it yourself. Thank you very much."

The meeting lasted all day. There were many speakers. Everyone had an opportunity to air their views. Many had their speech reduced to writing and filed it with the Commission. It was really the first open meeting in the thirty years the pollution battle has been waged.

On July 21, 1960, another called meeting of the Commission was held, this time in Hearing Room Two, House of Representatives, Olympia, Washington. This meeting was even larger than the meeting of May 18, 1960. There were 112 in attendance. Many spoke. The transcript of the record was 55 pages in length. I shall only include a portion of the record.

"The responsibility for following through with the recommendations rests with the Commission, and it is the intention that government shall assume full responsibility, financially and otherwise, for the water monitoring program with the full co-operation of all parties concerned.

"At the time the contract was entered into for the Gunter-McKee report, the Commission adopted a temporary policy of holding in abeyance certain of the permits for the pulp and paper industries. It will now be the policy of the Commission, through its staff, to review these temporary permits on the basis of the recommendations of the report and the requirements under Sections 11 and 13 of R.C.W. 90.48.

"Mr. Bacon recently issued a paper called 'Fish-n-Pulp', in which he advised organized labor to "insist that waste dilution and dispersion be recognized as a legitimate and beneficial water use.



"We would like to point out here that this philosophy has been thrown out by the State of California as unenforceable and detrimental to the best interests of that great state's economy and welfare.

"We do not intend to sit idly by and permit our precious state waters to be ruined by the introduction of such a philosophy as preached by these imported propagandists for minority special interest groups.

"It seems inconceivable to us that this body stands ready to adopt standards, even though they be interim, which would recognize and permit the use of our water resources for waste disposal purposes. That pulp mill pollution was recognized as a serious problem by the Chairman of this Commission is evident from the statement prepared by him in 1956 in which he stated "The greatest deterrent to the development of fisheries in this State is the pollution of our streams and spawning beds. Oyster beds are being wiped out. Crab, smelt, salmon, herring, trout, and other fish are being destroyed in public waters through release of poisonous pulp mill waste. Why, the situation is so bad that the Washington State Sports Council has gone on record as favoring a change in the state pollution control laws to require that membership of the Pollution Commission be comprised of free, independent citizens, instead of department code heads under the domination of the governor."

"MR. JAMES: Now, I'm handicapped to a certain extent but they asked me to come up here and present this resolution of the Inter-Tribal Council. My name is Norbert W. James, Lummi Reservation, and I am also representing the Lummi Tribe. I have a resolution here and no doubt the-to the Governor, Albert D. Rosellini, and I suppose this resolution-this resolution is drawn by the InterTribal Council which represents 37 tribes and bands of the State of Washington. And probably the best thing I can do with this is to read it and then you can understand it, or have you a secretary that can read it off more plainer than I would? I would appreciate it very much."

MR. COE: "I would like to have you read it into the record."

MR. JAMES: (reads) "To the Honorable Albert D. Rosellini, Governor of the State of Washington: We, the members of the Inter-Tribal Council of Western Washington Indians, representing 37 tribes and bands, do herewith submit the following resolution:

"RESOLVED, that Governor Rosellini be implored to direct that:

"The sulphite waste liquor tolerance as proposed by the Pollution Control Commission be not allowed; the aforementioned recommendation be disallowed entirely since the contents thereof are in large part in direct contradiction to the findings of scientific analysis and research, as well as in contradiction to the specific experience of those whose livelihood depends on the living creatures of the sea.

"(As an illustration of the lack of authority of the Pollution Control Commission recommendations, let it be cited here that where research experiments listed in the report bibliography-show conclusive proof after an 18-months' study, that 6 parts of sulphite waste to a million of water result in a total destruction of the oyster, the commission report recommends 40 to 80 parts).

"We do further implore Governor Rosellini to act on our behalf, as we believe he will hold with us that **ALLOWING THE DESTRUCTION OF AN IMPORTANT WASHINGTON STATE RESOURCE AND INDUSTRY, AS WELL AS THE SOURCE OF LIVELIHOOD FOR A LARGE NUMBER OF ITS PEOPLE, IN ORDER TO BENEFIT COMMERCIAL INTEREST CAPABLE OF CONTROLLING THAT DESTRUCTION, IS NOT THE ACTION OF PERCEPTIVE GOVERNMENT OF THE PEOPLE.**

"FURTHER LET IT BE RESOLVED that because of the vital nature of this problem, as affecting the Indian economy, the Governor be implored to urge that the Inter-Tribal Council of Western Washington Indians hereafter

be represented on the Pollution Control Commission Advisory Board.

"AND THAT the Governor cause the State of Washington immediately to conduct an intensive study by competent scientific investigators, of methods of waste control in industry, that may make it possible for industry and water life to live together, and both to thrive; AND TO THE END, NOT OF A BIBLIOGRAPHY, BUT OF ACCURATE, SPECIFIC FINDINGS, SO THAT LEGISLATION TO REQUIRE SUCH CONTROLS MAY BE EFFECTED;

"AND WE DO PRAY that, meanwhile, no sulphites, tannic acid, or other wastes, be dumped into the waters of the State, without specific, localized permits based on analysis by biologists of the Department of the Interior; to protect Indian rights, concurring in their findings with the State Department of Fisheries, Federal Fish and Wildlife, and the State Department of Game.

"BE IT FURTHER RESOLVED That the United States Department of the Interior be solicited immediately to initiate prompt and thorough investigation into the matter of aforementioned destruction of natural resources of the sea through industrial waste dumpage and the resultant loss of food and means of livelihood for the Indian people."

"And this has been carried on by the Chairman of the Inter-Tribal Council, Mr. Hank Hawkins."

MISS TRICK: My name is Betsy Trick from Seattle, and I am Public Relations Chairman for the Inter-Tribal Council of Western Washington Indians.

MR. COE: Do you have a prepared statement there?

MISS TRICK: No. Mr. James gave our prepared statement in form of the Resolution, and I would like to add this one point. I just talked with Washington, D.C., to our attorney and he has advised me that the Department of Interior must come in as we have asked. You people have gone out of state for scientific information to uphold your contention that 40-80 is not harmful to oysters. Your own report, one of your most exhaustive reports, the only exhaustive report the doctor who did it told me himself that 6 ppm was total death, total mortality for oysters in an 18-month period. The Indians feel that we should have scientific men from the Department of the Interior to make exhaustive investigations and, as Mr. James said, not just a bibliography, before any action is taken by this Committee. And, if necessary, the Indians will enjoin this Committee to do just that. Thank you."

MR. WALGANSKI: Gentlemen, this Committee: As President of the Washington Sports Council, I would like to clarify one thing. I am not a pollution expert. I am merely here representing about 20,000 sportsmen, and we have forever advocated clean waters and the abatement of pollution. Tom Wimmer is the Chairman of our Pollution Committee of the Washington State Sportsmen's Council, a very capable young man, very dedicated. Now he has written a letter, and I would like to read it into the record. It is a little more specific than I could put into terms for you, ad lib, so to speak. (Reads)

"In regards to the public hearing to be held by the Pollution Control Commission on July 21, 1960, concerning the establishment of interim standards as recommended in the Commission's Resolution No. 60-2 which is in compliance with the suggested Sulphite Waste Liquor tolerances set forth in the GunterMcKee report on Oysters.

"We wish to have entered into the record the following statement on behalf of the Council by its Pollution Committee Chairman:

"The Washington State Sportsmen's Council is opposed to the setting of any form of interim standards for the abatement of pollution. It has been our experience and observation that once you allow disposal of wastes into the waters and a problem of pollution arises, there is a long uphill battle to get the violators to remove their wastes from

the waters or to even install corrective measures which will improve the quality of the receiving waters. Two examples of existing interim control of enforcement: (1) The lower Snohomish River and Everett Harbor, (2) The Chambers Creek Estuary. Needless to say, there are many more examples of this type of control or lack of it."

Another meeting was called and held on September 6, 1960. This meeting was of such importance that I am including all the important parts thereof, including the notice.

### **NOTICE**

NOTICE is hereby given in accordance with Section 2, Chapter 234, Laws of 1959 (RCW 34.04.020), and Chapter 216, Laws of 1953 (RCW 42.32), as follows:

The Pollution Control Commission of the State of Washington will meet at 9:30 a.m., September 6, 1960, in the large conference room of the General Administration Building in Olympia, Washington, to enact rules and policies with respect to pulp and paper mill waste discharges to state waters, pursuant to the authority contained in Sections 11 and 13 of Chapter 216, Laws of 1945, RCW 90.48.030 and 90.48.070.

The rules and policies to be considered for adoption, if adopted, will supersede and take the place of all rules and standards heretofore proposed for adoption on which notice has been given.

The rules and policies to be considered for adoption are complete and are attached to this notice.

### **WASHINGTON STATE POLLUTION CONTROL COMMISSION**

A Statement of Policy and Program of Research  
With Respect to Pulp and Paper Mill Waste  
Discharge Into State Waters

(Filed 8/22/60)

#### **PREAMBLE:**

The Commission's policy of vigorously pursuing abatement of all forms of pollution has resulted in a remarkably improved condition of the receiving waters of our State. The recognition by the municipalities and industries has been most commendable. Over 90% of our industries have permanent permits. At the present rate of construction, most all municipalities will be in reasonable compliance within a short period of time; however, there are 11 of the present pulp and paper industry plants in our State that have not yet met the requirements for permanent permits.

For the past 18 months, the Commission has been pursuing a solution to the thirty-year controversy of sulphite waste liquor versus oysters. Two of the nation's outstanding scientists were assigned the responsibility of providing a report on the existing research and technical information available pertaining to this problem. Since the receipt of the report and the filing of Resolution 60-2, the Commission has afforded every interested party an opportunity to appear at two formal hearings, May 18 and July 21, to express his opinions regarding the recommended standards, research proposed, and problems in general, resulting in a large volume of information being made available to the Commission; and also a 26-point statement provided by biologists representing the pulp industry and Department of Fisheries in respect to the Gunter-McKee report. This information was requested by the Commission on July 21, 1960.

The biologists were in agreement on background values, analytical techniques, oyster spatfall and survival data, and field survey results in general. Although bio-assay research results on larvae and adult oysters varied in some cases, there was agreement that oyster MORTALITY was not a problem. Although tolerances recommended by the Fisheries Department included a considerable safety factor, the present conditions of water quality overlying oyster

beds are NOT at variance with those tolerances. It was agreed that available research regarding effects of SWL on oyster condition factor and total environment is inconclusive.

Generally, agreement has been reached on these points:

1. That the suggested Gunter-McKee standards are representative only of those which, if exceeded, would affect oyster mortality but that they do not concern themselves with the problem of optimum or tolerable environment.
2. That the suggested Gunter-McKee water quality standards would in effect permit a greater discharge of sulphite waste liquor into the water of the State than now prevails.
3. That further and more intensive research into the subject of oyster environment and a more intensive monitoring program is desirable and necessary.

The Commission, after evaluating all scientific information available to Doctors Gunter and McKee and results of additional studies completed since their report, are hereby adopting the following policy:

**POLICY:**

WHEREAS, The Commission is basically charged with the establishment and enforcement of the policy as declared in the Law of 1945, Chapter 216, RCW 90.48, as follows:

"It is declared to be the public policy of the State of Washington to maintain the highest possible standards to insure the purity of all waters of the state consistent with public health, and public enjoyment thereof, the propagation and protection of wild life, birds, game, fish and other aquatic life, and the industrial development of the state, and to that end require the use of all known available and reasonable methods by industries and others to prevent and control the pollution of the waters of the State of Washington"; and

WHEREAS, All of the existing average levels of sulphite waste liquor concentrations overlying oyster-growing areas are less than the levels proposed in the Gunter-McKee report; and

WHEREAS, The wide variety of conditions and considerations which may govern the extent of influence of a waste discharge preclude the establishment of any fixed formula or criteria for determining water quality standards state wide, and the program for control must be on an area basis and include recognition of hydrographic variations and their relation to various water uses; and

WHEREAS, There exists a need for additional research to determine the possible effect of sulphite waste liquor on growth and fatness of oysters and other marine animals, and the effect of sulphite waste liquor on the total aquatic environment; and

WHEREAS, It is recognized that the interest of the State is not fully served if industrial and population growth are unreasonably restricted, and, accordingly, there must be acceptance of the discharge of treated industrial and domestic wastes into state waters, but only in a manner which is compatible with and recognizes other water uses.

IT SHALL, THEREFORE, Be the policy of the Pollution Control Commission to adhere to the following principles as regards the pulp and paper industry of the State of Washington:

1. There shall be no increase in the levels of sulphite waste liquor concentrations in the waters of the State over those which have been determined to exist by previous state agency field surveys, or those which have been authorized

in permanent permits.

2. All pulp and paper mills shall be required to provide adequate recovery of settleable solids to fully protect all water uses from process wastes prior to release of said wastes into state waters; this is to be accomplished in a period not to exceed three years.

3. All sulphite pulp mills not having permanent permits, and other operations where similar chemical pulping operations are employed, shall be required to immediately file a positive plan with the Pollution Control Commission for the installation of recovery facilities (or equal), such facilities to be in operation within three years from the effective date of this filing.

#### RESEARCH:

Although existing research and field analysis demonstrates that, except for present areas of initial dispersion, the quality of all state waters is sufficiently high to preclude direct mortality of fish and shellfish, there is a lack of information regarding the effect of pulp mill wastes on the total environment and the fatness and growth factors; therefore, standards of water quality relating to allowable concentrations of sulphite waste liquor in receiving water courses will not be considered until the following areas of research have been concluded:

1. To measure quantitatively the effects of sulphite waste liquor on the estuarine environment and especially on the nanno-plankton on which oysters and their larvae feed;

2. To sample, analyze, and record, over a long period of time, the concentrations of nutrient salts, nanno-plankton, and higher forms of life in the waters of oyster-producing areas, with specific regard given to the nutrient salt-oyster condition relationship;

3. To determine the toxicity of specific components of hot-blown sulphite waste liquor, especially the low-molecular-weight organics that decompose on stabilization;

4. To investigate the biochemical degradation of sulphite waste liquor and its various components; and

5. To investigate the effect of sulphite waste liquor on growth and fatness of the Pacific oyster (*Crassostrea gigas*)

In conclusion, it is with a light heart that I review these proceedings. The Pollution Commission has now indelibly charted its course, which I believe is the same as that adopted by the Legislature years ago, as defined in the declaration of policy in the first legislation on this subject, to wit: the preserving of our natural resources from pollution of our waters. I believe the present Commission is committed to this policy. But it will not be easy. The victory will not be easily won. The consolidated efforts of the pulp mills give evidence of the strength of their fighting power in other states besides our own, through delay in the courts as well as political influence. I have had to abandon the growing of Olympia oysters after spending over thirty years and many thousands of dollars in grading and diking one of the finest natural Olympia oyster beds in Oyster Bay. As though that were not enough the Rock Point Oyster Company in Samish Bay, Northern Puget Sound, has been so badly polluted by the Bellingham pulp mill sulphite liquor that for many years the oyster growth has been stunted and the oysters are so poor that gallonage has been decreased to a point where a profit ceases to exist. I now conclude by complimenting the Pollution Commission and thanking them for this ray of hope, even to the point of faith in their carrying out their expressed outline of policy.

#### **Appendix A Continued**

The pollution problem has been discussed covering a period of some thirty years in the foregoing book because of

its importance to the oyster industry, both for the Olympia oyster (*Ostrea Lurida*) and the Pacific oyster (*Ostrea Gigas*), because it threatens the very existence of both industries. For that reason Appendix A was added. Circumstances have caused a delay in the publication of the book and in the meantime proceedings of such importance have taken place that I feel that the book would not be complete without this post script bringing it up to date.

Appendix A brings the pollution problem up to the closing down of the Shelton Mill in 1957. On September 19, 1961, a press release was published announcing a bonanza catch of Olympia Oysters had taken place in Southern Puget Sound. It was described as "fantastic", "reminiscent of the twenties".

On August 25, 1961, a new release appeared containing a statement by Milo Moore. It was in reply to newspaper statements made by the pulp mills. To quote, "This is not consistent with the facts to my knowledge as a member of that Commission for eight of the sixteen years since its creation. They have intimidated their own employees and the local communities by threat of shut down if control regulations are enforced."

The battle went on and on. Those desiring abatement piling up more evidence, the pollution offenders continued to increase the number of lawyers and public relations men. At last the Pollution Commission issued requirements, fixing time limits within which they would have to file their plans and a final date for completion of plants that would remove 850 % of the pulp liquor-and other requirements. The pulp mills appealed, and on December 6, 1961, Joseph Hollman, an attorney from Seattle, was appointed by the Commission as examiner to conduct the hearings.

A score of meetings were held. The number of attorneys increased. Each side again went through the evidence most of which has been covered herein. On November 17, 1961, a news release by R. H. Bailey, President of the Oyster Growers Association published an article charging attorneys for the pulp industry with "legal stalling". At a closed meeting Governor Rosellini, seeing the stalemate, asked both sides to let the technical experts work it out. They failed to agree so the State Pollution Commission asked the special examiner to order the suspension of the hearings. He did so.

On December 21, 1961, R. H. Bailey, President of the Oyster Growers Association, released to the press that government help had been asked by Governor Rosellini, and that it would be granted. Under Federal Law 660 the Federal Government can, upon request of a state, "assist in resolving intrastate pollution problems when they affect health and welfare."

A date was fixed for the joint conference and notice given to both sides, to wit January 16-17, 1962. Prior to that James M. Quigley, assistant secretary of health arrived, and immediately went to work. He took a 90 minute flight over the outlets of the pulp mills where he saw "clear cases of pollution". January 16th, the meeting was called to order. It was transcribed and published. A copy of it (three volumes) can be had from the Washington State Pollution Commission in Olympia. I pronounce it the most complete, the most orderly procedure, and conducted in the most fair manner to both sides, that I have ever heard or read. I shall only refer to the most important parts of it.

The conference was held before the U. S. Public Health Service and the Washington State Pollution Control Commission, as follows:

#### JOINT FEDERAL-WASHINGTON STATE POLLUTION CONTROL CONFERENCE

*Mr. Murray Stein*, HQ, Department of Health, Education and Welfare, Washington, D. C.; chairman.

*Mr. Leonard Dworsky*, officer in charge, Department of Health, Education and Welfare, Portland, Oregon; Conferee.

*Mr. James M. Quigley*, assistant secretary of Health, Education and Welfare, Washington, D. C.; Conferee.

*Mr. Wallace W. Bergerson*, director, Washington State Pollution Control Commission, Olympia, Washington; Conferee.

*Mr. Earl Coe*, chairman, Washington State Pollution Control Commission, Olympia, Washington; Conferee.

Opening statements were made as follows:

PRESENTATION ON BEHALF OF WASHINGTON STATE POLLUTION CONTROL  
COMMISSION

Opening statement, conference purpose, procedure, etc- by Mr. Murray Stein, chairman.

Welcome-by Governor Rosellini.

Comments-by Mr. James M. Quigley, Asst. Sec. of Health, Education and Welfare.

Remarks-by Mr. Wallace W. Bergerson, Director, Washington State Pollution Control Commission.

Remarks-by Mr. Earl Coe, Chairman, Washington State Pollution Control Commission.

Statement-by Mr. John Riley, Office of Attorney General, State of Washington. This was followed by statements by members of the Washington State Pollution Control Commission, then by statements of the following:

Statement on Behalf of Washington State Department of Fisheries

Statement on Behalf of Washington State Department of Game

Statement on Behalf of Washington State Department of Health

Statement on Behalf of Washington State Department of Commerce

Statement on Behalf of Washington State Parks & Recreation Commission

Statement on Behalf of U. S. Fish & Wildlife Service

Statement on Behalf of U. S. Corps of Engineers (written statement submitted)

Statement of Thos. O. Wimmer

Statement of Senator William A. Gissberg

Statement on Behalf of Washington State Sportsmen's Council (written)

Statement on Behalf of Municipality of Metro Seattle

Statement on Behalf of Pacific Coast Oyster Growers Association (by Mr. Edward Gruble)

This completed the first days hearing.

I shall now make a few comments on the most important parts of it.

Chairman Stein, in his opening remarks said in part; "This conference is being held under section eight of the Federal Water Pollution Act." Governor Rosellini and the Washington State Pollution Commission had asked for their assistance and they had accepted that responsibility. This conference only covered Puget Sound and its tributaries.

Governor Rosellini responded by welcoming their assistance in this long continued effort of our Pollution Commission to solve this important question.

Chairman Stein then introduced the man whom he called his boss Assistant Secretary of Health, Education & Welfare, Mr. James M. Quigley who is in charge of Federal Water Pollution Control activities. He pointed out that at the recommendation of President Kennedy, the Congress, this last summer had passed extensive amendments to the basic Federal Act. These amendments called for a broad, sweeping attack on water pollution in this country, that he had been designated and given the primary responsibility for implementing this program, and through this conference he hoped to work together with the state officials. He then called upon Mr. Bergerson to take over for the Commission.

Mr. Coe, for five years chairman of the State Pollution Commission was called. He committed the Commission to be firmly dedicated to the policy of firmly carrying out the full intent of the state law.

Mr. Riley, representing the Attorney General's office, then covered the legal difficulties, the delays caused by opposing attorneys, some twenty of them. He also stated that they were now litigating one "fish kill case", against one pulp mill for damages for the kill of 2,000 fingerling salmon. He seemed to feel there would be no end to the delays, although two mills had agreed to comply. Mr. Neal and Mr. Charles Ott then spoke. Mr. Neal, after a thorough presentation of the history of past negotiations, ended by saying, "We feel that there are no known and reasonable methods to take care of these situations". Mr. Ott defined geographically the Puget Sound area. Also the value of clean waters for boating, sport and commercial fisheries, shipping, and how pollution affects them. The tremendous damage if it were not abated.

After lunch Mr. Lyman Neilsen gave a comprehensive statement in regard to the permit system used in this state, followed by a table showing that out of 532 permits issued, all had complied or were in processing compliance except 41 % of the pulp mills, the worst offenders.

The concluding speaker, in the Commission's presentation, was Mr. James Behlke. He gave a complete analysis of each offending pulp mill, the amount of sulphite daily discharge, its equivalent in population to equal the pollution effect, and much other interesting data. Chairman Stein asked about delays in mill requirements. Mr. Behlke said in part, "I feel that there is everything, including the kitchen sink in them, really. They start in on the broad basis of the law and then go right on down the line to specific elements". The detail table of the facts were to be set out later in the record. Also copies of all pulp mill permits.

The record sets out a letter from Industrial Wastes Bio-Research, Inc., to Mr. Earl Coe, chairman of Washington Pollution, part of which I quote: "An independent scientific study is imminently necessary unless we lose our vast fish resources and/or our booming industrial future. Age old political solution to this problem is not practical. We propose to obviate this with well founded research based on conclusions and let the chips fall where they may. \* \* \* The information thus derived will be available to all and should be the basis for both voluntary and required



abatement regulations." This was followed by a statement of important dates, pulp and paper industry waste disposal problem. It started with 1940-1943 and gives the activities and proceedings of the Commission to this date. It also sets out the Commission's Comprehensive Program.

Next followed a series of papers by State Departments. Cedric Lindsay for the Fisheries Department, Cliff Millanbach for the Department of Game, Mr. Emil Jensen for the Department of Health, Mr. Richard M. Beebe for Department of Commerce & Economic Development, Mr. Rollefson for State Parks and Recreation, Mr. Dick Pressey for U. S. Fish and Wildlife Service, Mr. Ray E. Holman for U. S. Corps of Engineers; each of these had abundance of data showing the ravages of pollution affecting their respective department. Space prevents even quotations.

The program continued with statements as individuals Mr. Thomas Wimmer, Senator William Gissberg, John Migdula of Washington State Sportsman's Council spoke. A very powerful document. Then Harold Miller, in behalf of -municipality of metropolitan Seattle, told how Seattle was expending 130 million dollars for domestic sewer facilities. The seven pulp and paper mills dump enough pollution into Puget Sound every day to equal sewage from 8,700,000 people. Mr. Edward J. Gruble made a very strong presentation in behalf of the Pacific Coast Oyster Association, after which the conference adjourned until the following day.

The second day of the hearing, set out in Volume 11 and III of the transcript, started with a statement by Milo Moore on behalf of the Pacific Coast Oyster Growers Association, who also submitted a written statement. He gave a review of the documented records made during his years as Director of Fisheries and as a member of the Pollution Commission. To answer the three most important points in this discussion, First: He submitted these documents to show that there is pollution damaging our fisheries and other sea life. Second: "Have adequate measures been taken to control pollution?" His answer is "No" . Third: Have there been any undue delays? Answered "Yes". We hope that the time will soon come when the legal forces opposing correction of the problem, (a battalion of twenty or more of the state's most eminent lawyers) can be exchanged for competent technicians employed to revise the methods of industry."

Next, in behalf of Rock Point Oyster Co., R. N. Steele reviewed the history of that company since its start in 1922. This was accomplished by an exhibit showing gallonage from the first years operation of 600 gallon to a high of over 50,000 gallons, then as the pulp mills in Bellingham and Anacortes increased their output, the production decreased to five or six thousand gallons per year, even though acreage and seed planting had been increased. Another exhibit showing the seed plantings in Padilla and Samish Bays from 1947 to 1962. There are no plantings of seed during the past two years, and unless pollution is stopped both areas will probably be abandoned in about five years.

Mr. Nat Waldrip spoke in behalf of the Olympia Oyster Growers Association. He ended up, after reviewing the disastrous affect the pulp liquor has had on Olympia oysters, almost to extermination, with the statement that since the closure of the mill at Shelton in August, 1957, the output has gained by 300 %. Also the smelt, trout, herring, salmon, clams, in fact the entire environment of local waters has made a like recovery. Later another speaker, Mr. David McMillan, on behalf of the Olympia Oyster Company, covered the situation on southern Puget Sound. Dave was formerly with the State Fisheries as a biologist. Some years ago he accepted a position as manager of the Olympia Oyster Company, perhaps the largest grower of Olympia oysters. His knowledge of biology served him well, especially after the Shelton mill was installed. His talk was very convincing as he reviewed, as he followed the poisonous effect of the mill effluent year after year until the oysters were almost depleted, and its rapid recovery since the mill closed in 1957. He had the data to prove his statements.

The final statement was by R. H. Bailey on behalf of Pacific Coast Oyster Growers Association. Mr. Bailey is deeply interested as an oyster grower. both in areas affected by pulp mill pollution, such as Padilla Bay, which he acquired

prior to the days of the pulp mills, and in other areas where there are no pulp mills, such as Willapa Bay. He is deeply interested financially and in the preservation of sea life as a heritage of future generations. He has for many years had opportunity to observe the difference between clean water and polluted water. His statement was long and covered many different phases of the subject. It was made after Mr. Bacon and other representing the pulp mills had presented their case. Every point was challenged by proof, mostly documented. When he was through, every point made in behalf of the mills was answered. Having been in the oyster business even before Mr. Bailey, I read his statement with deep interest, for he made no statement that did not correspond with my own experiences and knowledge. I feel that not only the oyster industry as a whole but the fisheries and all those who enjoy the use of public waters owe "Bill" as we call him, a debt of gratitude. He has taken a leading part in arousing public interest in the dangers and effect of polluted water in Puget Sound. It was largely through his efforts that "Citizens for Clean Waters" was organized; that several T.V. programs and interviews were shown, all of which were educating the public on this subject. Also the many news released articles that were published, and the published replies to propaganda articles published through the pulp mills or their association.

The record shows that the following statements were made at the hearing in addition to reams of exhibits and appendix. They covered every point that they ever have raised. The pulp mill statements consisted of cost of complying with requirements of the Pollution Commission and a plea for those workmen who would lose their jobs if the Pollution Commission insisted on compliance. As to cost of compliance, it is not asked that a new mill replacement be made, but that an anti-pollution system be added. I do not know what it would cost, but I venture a guess that the Federal Pollution men know. Many of them have been constructed under their supervision in the East, South and Northern parts of the United States for much less than the many millions they claim it would cost. At least one mill found it so, according to an article published by an issue of Green Bay Press-Gazette of Green Bay, Wisconsin. The title was "Northern unveils new anti-pollution system. One million dollars spent to combat waste." The opening of this pulp mill was attended by 120 experts in the field of water pollution; also by conservation groups, the "League of Women Voters", city officials from Green Bay and DePere and representatives of other paper mills. Also H. H. Dahl of the Water Pollution Department in the U. S. Health Service, water pollution control department and many other pollution control officials. A new method of completely disposing of the sulphite liquor, the products of which were of sufficient value to net a profit. It was pronounced to be the "Most Complete Process" known.

As to the labor problem; the labor unions were represented. He said that mill employees were nervous about it, but that they were good citizens and did not want to destroy the sea life. All concerned have hopes that it can be worked out in a manner satisfactory to them.

The record is made and the clock of the government is going.

After a short recess Chairman Stein gave a summary of the conclusions of the conference for the conferees. First, the conferees were in agreement that the Puget Sound area is subject to the jurisdiction of the Federal Act. Second, that there is pollution in these waters. Further, that those who are not now in compliance with state requirement take action to abate such pollution. That engineering plans be submitted and approved by January 1st, 1963. That the representatives of both the State and the Public Health Service develop a joint program. That a date for completion be arrived at later. He set out progress plans which had been used with satisfaction in the correction of pollution problems in other parts of the United States. All data and work sheets would be available for inspection by all parties concerned and the public.

This decision was not accepted graciously by the pollution offenders. The press was used extensively. On January 19, 1962, the day after the conference ended, Lawson Turcotte of Bellingham, speaking for the Northwest Pulp and Paper Association, called the hearing a "Sham". On May 11, 1962, Argus published an article by Charles F. A. Mann, using many of the arguments heretofore set out, which was answered in the same publication by R. H. Bailey,

president of the Pacific Coast Oyster Growers Association, using much of the same material as he had used at the conference. On May 9, 1962, Edward J. Gruble released a "news release" in behalf of "Citizens for Clean Waters", in which at a meeting the group had endorsed action taken by the joint Conference, which set a clean-up date deadline of January 1, 1963, for pulp mill pollution abatement by eight North Puget Sound sulphite mills.

This post script is almost as long as the appendix itself. The author feels it necessary, because he feels that more was accomplished toward pollution abatement than has been accomplished by the thirty year's effort by those who believe clean water should be maintained in Puget Sound.

I will conclude this by mentioning that in mid-August, 1962, the Rayonier, Inc., pipe line had broken out about 100 feet from shore from its pulp mill at Hoquiam in Grays Harbor. The State Fish Department reports it has caused "one of the worst fish kills we've had in years". The State Game Department technician says "Nearly a complete kill". Mr. Neale of the State Pollution Commission said dead fish had been found in the Chehalis, Hoquiam and Wishkah rivers; he said they included trout, perch, sculpin, sturgeon, shad, crabs, flounders, and some adult salmon". However sorry we may be, yet we shall never again have to prove that pulp sulphite liquor destroys sea life.

It is now September, 1963. Five year permits have been granted with certain periodic requirements. A -floating laboratory, furnished by the Federal Government, has been in operation for some time. It is manned by scientists, also furnished by the government. They have made several reports on operations both near Everett and Bellingham, which show interesting results. The program seems to be well organized, and so far as they have gone their findings have been in support of previous findings by state biologists as herein set out. We are still hopeful that it will have satisfactory results. It will not come as soon as we would like, but I predict that it will come.

I have done my best to relate in this book a complete and accurate history of the oyster, born in Japan, accepted in this country as though it were a native to our waters. Also covering its expansion up and down the coast until it has become a real asset to posterity both as an industry and a delicious food.

During the years many problems have been worked out through the efforts of those fine men who have devoted their efforts as I have related. During the years the Pacific Coast Oyster Growers Association has been the heart and the life blood of the industry. I am proud to have been one of those men. Yet I feel humble when I think of efforts and time given by others in a co-operative spirit. The type of men I have had the pleasure of working with are men who endorsed and followed the pattern in life set out in the prayer at the opening meeting of the Pacific Coast Oyster Growers Association annual convention held in Seattle in August, 1952. The prayer, by Arnold Waring, a member of the Association often mentioned as a leader in the effort to meet the problems, was as follows:

"Dear God, our Heavenly Father, Creator of the Heavens and the Earth; May we who are gathered here be mindful of our responsibilities to Thee. We know that for hundreds of thousands of years You created, propagated and cared for the product of our great industry-the oyster. May we be mindful of our task in these later years of being Thy stewards of the oysters available for our endeavor. Forgive us when we tend to think Your oysters are only for our use. Forgive us when we think in selfish terms as to what we can get out of Your oysters rather than what we can do with them. May we become as interested in our fellow oysterman's success as we are in our own, to the end that we all might handle Your product for the nourishment and enjoyment of mankind as is Thy purpose. Knowing the abundance of Thy love for those who serve Thee, may we place our confidence in Thee for the reward for our efforts.

"Through Christ Jesus our Lord we pray. Amen."

**APPENDIX B**  
**Pacific Coast Oyster Growers Association Annual Meeting**  
**Held in Shelton, Washington, August, 1955**

**DEDICATION TO E. N. STEELE**

"In 1924 the first importation of any quantity of Japanese oyster spat, sufficient to warrant a commercial venture in oyster growing, was landed in Seattle and rushed to the oyster beds of the Rock Point Oyster Company in Samish Bay, near Blanchard, Washington, and bordering the scenically famous Chuckanut Drive, now a part of State Highway 99.

The moving spirit of this new venture was Mr. E. N. Steele of Olympia, Washington, who for several years previous had been and still is identified with the Olympia (native) oyster operations in the bays and inlets of Upper Puget Sound, centering at Olympia.

The rapid growth of the Japanese transplants (*ostrea gigas*) on the Samish Bay beds induced others in Puget Sound, Willapa and Grays Harbors to bring in oyster seed (spat) and by 1930 a considerable planting had been made, sufficient to warrant the organization of those who were growing, harvesting and marketing the Japanese transplants under various trade names. This organization, now known as the Pacific Coast Oyster Growers Association, has been active in the interests of the growers of these Japanese transplants now known as "PACIFIC" Oysters.

Mr. Steele, organized and called the first meeting, became the first president of the association and continued in that capacity until the fall of 1945 when, after he requested a change, W. Arnold Waring was elected to succeed him. Presidents of the association who followed were: F. W. Mathias, Roy E. Wilson, John L. Wiegardt, C. R. Elsey, and Malcolm B. Edwards.

Through the years Mr. Steele has unselfishly given of his time, energies and funds to further the needs and the stabilizing of this industry, now over thirty years old. Naturally, with all due respect and admiration to the many others who helped in establishing the Pacific Coast Oyster Industry as we know it today, it is with considerable pleasure and high regard for E. N. Steele's devotion to the association's march to a permanent place in the Pacific Coast's many commercial activities that this annual report for 1955 is dedicated to "Dad" Steele. May he remain with us, advise and counsel us for many, many more years.

**"REVERENT PRAYER DISTINGUISHES PACIFIC OYSTERMEN'S  
CONVENTION**

(Quoted from page 17 of October, 1955, issue "Pacific Fishermen")

"Prayer is rare at industrial conventions, in the fish business at least, and the Pacific Coast Oyster Growers Association set a new note for such conventions at its recent meeting in Shelton, Wash., when E. N. Steele, founder of the Pacific Oyster business, delivered an earnest, thoughtful and reverent invocation as the meeting opened."

"That alone was enough to make the convention notable; but to E. N. Steele it will be memorable also, because his son, R. N. Steele, was elected president of the Association."

Malcolm B. Edwards, Retiring President  
Charles R. Pollock, Secretary-Treasurer

Pacific Coast Oyster Growers Association Annual Meeting  
Held in Ocean Park, Washington, August, 1956  
**DEDICATION TO IVAN HOLM**

"In the Annual Report for the year 1954-55, it was a distinct pleasure to dedicate the report to Mr. E. N. Steele, the founder of the Association and its president for many years. His activities in the industry were confined to the upper and lower Puget Sound operations and for the year 1955-56 it is again our pleasure and honor to dedicate this publication to one of the fathers of the Pacific Oyster Industry in the Willapa Harbor, Washington, area.

The man to whom this report is dedicated is a native Washingtonian, born in the area where he now resides on March 16, 1883. The name Naselle is almost synonymous with the name Holm and we give you your friend and ours, Mr. Ivan Holm, as the subject of this sketch. At the start we assure you that words are not adequate to express the deep regard and respect all members in the industry have for Ivan, who with J. H. Doupe, the Wiegardt Brothers, and others imported the first oyster seed into the Willapa Harbor area. Ivan's oyster interests date from about 1930.

Mr. Holm has been identified with the industries indigenous to the Willapa Harbor area, namely, logging, fishing and oystering. From 1906 to about 1910, Ivan handled the rural mail route in the Naselle River area and has been a resident of the town of Naselle all these years. On June 9, 1909, he married Dora Haslam, who through the years has been known and loved by all who have had the pleasure of her acquaintance. They have two children, Mrs. (Virginia) Dale Estoos and Forrest Holm, with nine grandchildren and three great grandchildren. Their forty-seven and more years have been a cooperative family venture, now crowned with success and a host of staunch friends.

Ivan's grandchildren, for some unknown reason, have always called him "Bump" and many of his friends in the area use the same endearing term and say of him as follows, "He is one of the grandest men we have had the privilege of knowing". Too, the kids love him and always look for a handout of gum, with which every car he has had has been well stocked. On the lighter side, he loves to play cribbage and bridge, has been the backbone of the Naselle High School athletic teams for years, and it is said he is ready to bet a hat on such things as elections and the natural setting of oysters in Willapa Bay, and is ever ready with a helping hand for his friends in need.

in the activities of the Oyster Association, his name first appears as a committee representative from the Willapa area on September 29, 1932. He served in this capacity for several years. In 1946 he was elected to the Board of Trustees and served continuously in this capacity from 1946 to this year 1956. In addition he served in and chairmanned the various committees over the years.

All the Pacific Oyster growers and processors, we are sure, will join with us in dedicating this annual report to Mr. Ivan Holm, who has given so generously of his time and resources to furthering the progress of our industry.

Malcolm B. Edwards

Charles R. Pollock

Pacific Coast Oyster Growers Association Annual Meeting  
Bellingham, Washington, August 15, 16, 17, 1957  
**DEDICATION TO JOHN L. WIEGARDT**

"At a called meeting of the Board of Trustees, held in Shelton, Washington, September 14, 1954, the oystermen to whom we dedicate this program requested permission to read a Resolution, which briefly provided that after a Trustee had served six years (two terms) he is ineligible for reelection until one, or more, years after the end of his second term. His comment being, ". . . the Association should have new blood on the Board from time to time to replace the spawned out oystermen."

MR. JOHN L. WIEGARDT, the subject of this sketch, has been identified with and, personally experienced the ups and down of the Willapa Harbor oyster industry, since before the turn of the century, when he and his brothers worked with their father, a Willapa Harbor pioneer and oysterman, later to take over operations under the partnership of Wiegardt Brothers. Members of the third generation are now actively engaged with them in carrying on the business.

Since the organization of the Association, John L. Wiegardt has been closely identified with its management, and, until his Resolution was approved in 1955, a Board Director or member of the Board of Trustees, after incorporation in 1948. At the time of the ill-fated N.R.A. Code procedures he was Secretary of the Willapa Harbor section, and has been chairman of the various association committees, including the seed committee. Being chosen president in 1949, he went to Japan early in 1950 to represent the Association in seed negotiations. His special activities in the Wiegardt organization have been in office management, promotion and selling, and "TIDEPOINT" canned and smoked oysters are known throughout the West as high quality products.

Although somewhat conservative by nature, he has, through the years, by his sane and constructive approach to Association problems, endeared himself to all members of the industry.

The dedication of this program to John L. Wiegardt is in deep appreciation for personal interest in the Association over the past 27 years."

Pacific Coast Oyster Growers Association Annual Meeting  
Olympia, Washington, August, 1958  
**DEDICATION AND IN MEMORIAM - F. W. MATHIAS**

It was planned to dedicate this annual meeting report to Mr. F. W. (Matt) Mathias and, now, because of delay in assembling the items for inclusion therein, it is our extremely sad and difficult task to pen a memorial to one great friend and gentleman, who, while his well-rounded personality, unusually rare and difficult to replace, will long be remembered, for his untiring efforts, not only for the betterment of our Pacific Oyster industry, but for all of our great State of Washington.

In the Seattle Times magazine section of February 23, 1958, in an article titled, "HE 'SELLS' WASHINGTON STATE", Lucille McDonald devoted a full page to the career of our friend Matt Mathias who "for more than thirty-five years-has devoted imagination and energies to promotion of his adopted home."

Born seventy-five years ago in Wessington Springs, South Dakota, he came West in 1905, found Washington State and fell in love with its streams, mountains, and seashore. The writer's first contact with Matt Mathias was in 1922, when as a neophyte fisheries collector and inspector for the State Division of Fisheries-selling razor clam licenses on the Grays Harbor beaches, I called on him in Hoquiam when he was Chamber of Commerce secretary and county game commissioner. His cordial approach at that time, and his unselfish help, advice, and counsel through these many years has been a constant inspiration.

In his book, "The Rise and Decline of the Olympia Oyster" under the heading "Benefactors," E. N. Steele writes:

"F. W. MATHIAS-SOME PEOPLE JUST DO THINGS BECAUSE THEY love to do them. Others because they have a financial interest in what they do. Such is the relationship between F. W. (Matt) Mathias and the Olympia Oyster. He has never owned or operated an Olympia Oyster bed nor had any financial interest in the packing or distribution of them. Yet, he has contributed generously of his time and energy.

"Matt was Secretary of the Olympia Chamber of Commerce for thirteen years. Before he came here, he was a booster for Olympia oysters because he was fond of them as a food. When he accepted the said position in 1941, he took up as his keynote the advancement of Olympia's expansion by the use, in all the city's publicity, of the phrase, "Olympia, the home of the Olympia Oyster." This received popular approval, and many an article was written and published in magazines and newspapers which gave extensive advertisement to both. Matt joined the Olympia Oyster Growers Association. He attended our meetings regularly, and helped us to solve our problems. He served on many important committees. He has a sense of compatability and diplomacy, balanced with good judgment. Although he had no financial interest he paid his dues, performed important duties requiring travel expense without remuneration.

"This continued, not only during the boom days of the industry, but during its decline to the present time. He has fought for the protection of the natural resources of our state, our oysters, clams, fish and other sea food, but especially the Olympia Oyster. He contends that the balance of nature in our waters must not be disturbed, and that trade waste, especially sulphite liquor, should not be permitted to enter our public waters. He has served on our Pollution Committee for years.

"The Olympia Oyster industry owes Matt a great deal for his unselfish and very able service."

Finally, we will remember him as a genial, safe, sane, and constructive member of the Board of Trustees of the Pacific Coast Oyster Growers Association for many years; chairman of several different committees over that period and president in 1946-1947. It was largely through his efforts that the association was able, after nearly a year's negotiations with several governmental agencies to secure delivery of oyster seed in 1947 before any regular commercial exporting was permitted out of Japan.

Hail and farewell!

E. N. Steele

Charles R. Pollock

### **DEDICATION TO DR. TREVOR KINCAID**

"For some years the Pacific Coast Oyster Growers Association has dedicated the program of the annual convention to some outstanding person in the oyster industry who has been identified with its growth and active in promoting greater consumption of these delicious bivalves, and it is with considerable pride the Association dedicates this 13th Annual Program to Dr. Trevor Kincaid.

"Coming to Olympia, Washington, in 1889, as a boy of 17, his interest in the oyster industry dates from that time. Already a biologist he was very early called upon to help solve problems in the infant oyster industry. At that early date the "Olympia Oyster" was the only oyster marketed, and he spent many summers in studying the growth and development of these native oysters. Naturally, with the importation of Japanese transplants, now called 'Pacific Oysters', he has continued his interest and study of the oyster industry in the many areas where they are now produced.

"Dr. Kincaid was born in Peterboro, Ontario, in 1872, and as noted above, arrived in Olympia in 1889. As a young biologist he already had 5,000 identified insects and a large herbarium when he entered the University of Washington in 1895. Hardly a year passed before he became a laboratory assistant and he continued to teach at the University until his retirement at the age of 70. He had many opportunities for enrichment in the scope of his work. He was with the Fur Seal Commission in the Pribilofs in 1896, and the Harriman Alaska Expedition in 1898. For our government he was in Japan in 1908, and Russia in 1909, gathering parasites of the typsy moth. It was in Japan he became interested in the oysters raised there and very early saw the possibilities of transplanting same to our shores. A year of graduate study was spent at Harvard, a summer in the Bermuda Islands and many summers in our own San Juan island, where he helped establish the University of Washington's Biological Laboratories. Since his retirement Dr. Kincaid has written and published on a hand press several scientific papers.

"With his wife, Louise, their six children, and twenty-one grandchildren and hundreds of former students scattered all over the world who remember him as their 'Beloved Professor' we can only add it is a pleasure and privilege to dedicate this program to one who deserves such recognition.-C.R.P."

At the Convention held in Tacoma, Washington, August, 1960.



## **DEDICATION TO ZAZA FARRINGTON SIMMONS**

Zaza Farrington Simmons is the grandson of Michael Troutman Simmons, the dauntless pioneer, who led the first group of settlers north of the Columbia River to found what is now the City of Tumwater in October, 1845.

Zaza or "Razor" as he was nicknamed in early days, has been interested in logging and oystering in his lifetime. His first job was working as a section hand on the Port Blakely Railroad in Kamilche Valley about 1893. Zaza was a good worker and he soon became a locomotive fireman. Years passed and Zaza progressed, first to brakeman, and then to locomotive engineer. In 1920 he went to work as engineer for the Callow Bros. Logging Co. in the Wynoochee Valley. The Simmons and Callow boys were raised on adjacent farms. Zaza and Rusty Callow, the famous rowing coach, are close friends today.

In 1922, Zaza became locomotive engineer for the Mason County Logging Co. During one day of 1927, the locomotive engine's air failed and the crew had to jump to safety. Zaza's motto became "When they get going too fast I unload", and he became known as "Casey Jones" Simmons.

Simmons bought his first piece of oyster land in 1902 but it was not until 1934 that he started selling a few oysters in the sack. In 1942 he commenced operation of his present opening house. True to his motto of former days, things weren't going too fast for him in the oyster business, so he hasn't unloaded.

Zaza, whether engaged in logging or oystering, has always bubbled with friendliness and he will long be remembered for his unlimited energy to dance "most of the night" anywhere anytime!

We wish him a most happy 82nd birthday-August 21, 1960!

## **PROGRAM DEDICATION RAY and NEWELL ELLISON**

At the Annual Convention held in Seattle, Washington, in the Doric Mayflower Hotel, August 25-26, 1961.

H. R. and J. N. Ellison, or Ray and Newell as they are known by their many friends, entered the oyster business with the purchase of a small piece of oyster land in 1924. This partnership has always been a working partnership, until 1946, Newell worked the oyster beds and Ray worked on the outside helping to finance the project. In 1946 it became a full time occupation for both brothers, they enlarged their opening plant and began to purchase more oyster land.

.The 'Ellison Brothers' have been strong advocates of measures to insure clean waters and preservation of our natural resources and for 37 years of oystering they have followed the same motto-'Honesty is the best policy.'

"We wish them continued success!"

"We pause again to greet the Pacific Coast Oyster Growers Association's first president, E. N. Steele, known as the 'Daddy' of the Pacific Oysters, who has only missed two of the annual meetings since the association was founded about 30 years ago. With improved health, we look forward to his being able to attend our annual meeting this year."

### **DEDICATION TO SAMUEL GEORGE BULLDIS**

At the 16th Annual Convention held at the Doric-Mayflower Hotel in Seattle, August 22-24, 1962

The dedication of this program is to one of the younger old timers in the oyster business ... Samuel George Bulldis. Sam, as we all know him, was born in 1895 on the Island of Marmora, in the Province of Dardanelles, then under Turkish rule. He arrived in this country in 1912 and went first to Astoria, Oregon.

A veteran of World War I, he saw service with the famous 41st Division. Coming to Tacoma following his discharge, he worked a short time for lumbering manufacturing concerns, and in the early 20's began his long career in the fish and oyster business with the Bay City Market. In 1928 he joined Victor Brothers, and in 1929 purchased their interests and established the National Fish and Oyster Company. His first oyster opening house was started in 1934 in Tacoma on Marine View Drive. In 1940 his company purchased tide flats East of Olympia on Puget Sound. In 1954 his opening house was moved to the present location, 2521 North Meridian Road, Olympia.

Married in 1928, he has three sons, George Sam, John Andrew Sam, and James Sam, and thirteen grandchildren. George and James are with him in the operation of the National Fish and Oyster Company. His wife passed away in 1950. A year or more later, on a trip to Greece, he married again and has one daughter, Angela Sam.

Sam has long been active in civic and fraternal affairs in Tacoma, and has been an enthusiastic member of the Pacific Coast Oyster Growers Association for many years.

### **DEDICATION TO CHARLES ROY ELSEY**

President, 1950-51, 1951-52 - Board of Trustees, 1948-1957-1962

At the 17th annual convention, held at the Georgia Hotel in Vancouver, Canada, on August 21, 22 and 23, 1963.

The program was dedicated to Charles Roy Elsey, as follows:

Charles Roy Elsey, best known as "Roy" to his many friends and business associates, was born in Pilot Mound, Manitoba, on December 14, 1898. He obtained his elementary education in a rural school and at the age of twelve moved to the Okanogan Valley, in British Columbia, where he took his secondary education in a consolidated school in Summerland.

On graduation from high school he attended Vancouver Normal School and obtained a first class teacher's certificate. Two years at the University of British Columbia followed, where subjects pertaining to the pre-medical course were taken. He interrupted his studies by going to Smithers, B. C., to be principal of the school, where he taught grades 8 to 12. At the conclusion of two years, in 1921, he married his primary teacher and returned to U.B.C., this time to concentrate on chemistry and biology. He received his B.A. with first class honors and was awarded the Canadian Club Scholarship. Perhaps his entrance into the field of Marine Biology was indicated by his thesis which was on "The Life History of the Clam." An opportunity followed to do volunteer summer work at the Pacific Biological Station at Departure Bay.

In the fall of 1924 he became one of the original teachers in the new Lord Byng High School located in Vancouver, B. C. While at Lord Byng his studies toward M.A. credits continued. In July, 1925, he became the father of his first son. In an effort to secure longer holiday period for study, he took a position as chemistry professor at Brandon College, Manitoba. Before the arrival of his second son, in September, 1928, he returned to British Columbia to join the staff of Oak Bay High School in Victoria.

Repeated periods of research work during summer holidays at the Biological Station resulted in a permanent appointment as Marine Biologist in charge of shellfish investigations.

His studies continued, which included three months at Stanford University, and a final eleven months at Rutgers, New Jersey, where he received the degree of Doctor of Philosophy.

He then returned to British Columbia where he resumed his duties at the Biological Station, and following a chance meeting on the Nanaimo boat with Mr. H. R. Mac Millan, he was offered a position with British Columbia Packers Limited. This he accepted in 1937, and in 1956 rose to the position of vice president in charge of research and development. He has held a place on the Board of Directors since 1948.

During his many active and devoted years to industry, he has always made time to serve on numerous committees. Such have been related to church, education, science and service clubs. He was recently honored when he was selected by the Canadian Department of Foreign Affairs' Minister to be one of a highly select group of scientists representing Canada at an important United Nations Congress in Geneva, Switzerland.

In December of this year he will be retiring when he plans to remain in Vancouver, and devote more time to his grandchildren, girls aged 10 and 6 and boys aged 5 and 1.