istrator for Fisheries in 1981.

"A review of that resume reveals that Bill Gordon had trouble holding onto a job. He moved around a lot and we are not sure whether the Peter Principle has worked yet or not.

"At any fisheries meeting you can divide the house on people who are pro or con on the views of Bill Gordon, because he is very outspoken on matters concerning fisheries, fisheries management, and fisheries research. That outspokeness is not so much in the form of official directives, but rather is a stimulus for most of us to do a lot of thinking about what we are doing and how we want to do it. That is one of the many contributions that Bill has made in the fisheries area. There is no question in my mind, and I could get unanimous consent from people in the fish business, that when it comes to marine fish management, Bill Gordon is Mr. Fish. In Gloucester he was known as the Cod Czar; he now has become the Czar of all fisheries issues in the United States and certainly has the respect of his international colleagues as well.

"It would be very difficult not to be able to say positive things about Bill, and not just because he's my boss. He is a boss that I have been allowed the opportunity to differ with more than any other boss I have ever worked for, and I think that is a credit to Bill's management style. He entertains the views of people, he's provocative, he forces us to think and to look at issues, he allows us the opportunity to exercise our responsibility and to do those things that we think are right, with the strong guidance of his broad experience. There is no question, and I know that I speak for the whole Fisheries Service, that Bill Gordon has to be one of the best Directors, if not the best Director, the Fishery Service has ever had. That places him in a class with some very notable people. There is no doubt in my mind that as a result of his career he will go down in the annals of fishery science as a person having made some of the greatest contributions to fisheries management and fisheries research in the United States. Bill, it is a great pleasure for me to introduce you, not just as my boss, but as Mr. Fish."

Rededication Address III:

Address of Mr. William G. Gordon, Assistant Administrator for Fisheries, NOAA

"Distinguished guests, ladies, and gentlemen.

"About the only thing Allen left out of that introduction is that some people have referred to me as the Marco Polo of NOAA. I guess I have been in a few places around this world at one time or another, sometimes in places where even my boss cannot find me.

"I think it is timely that we gather here not only to review the background of the Woods Hole Laboratory, but also to rededicate it. My sincere thanks to Dick Hennemuth and his staff for doing an excellent job of pulling this whole thing together. It has been a welcome respite to come here this week. I thought I was going to get away from the oppressive heat and humidity of Washington for a week, but didn't quite make that.

"I can think of no institution which has a prouder history of accomplishments and distinction in the fisheries arena, and that is anywhere in the world, than the Woods Hole Laboratory. Yet, despite its august past, I believe that the future holds even greater challenges and accomplishments for this Laboratory. People, like Spencer Baird who started it, and past directors William Royce, Herbert Graham, Robert Edwards who are here today, and now Richard Hennemuth, can take real pride in knowing that they put that hundred years on a good course.

"Today I want to describe the role the scientists here in Woods Hole have, and will play, in fisheries management. But first, perhaps we should look at some of the highlights of the past 100 years in the development and management of the New England fisheries, since the waters off New England was the principal area to which the Woods Hole Fisheries Laboratory directed its efforts.

"We know that over 100 years ago, the United States Commission of Fish and Fisheries, predecessor of the National Marine Fisheries Service, was begun amid concerns for the conservation of living marine resources which appeared to decline because of intensive exploitation. We are told that its first Commissioner, Spencer Fullerton Baird, engaged in lengthy and often heated discussions with fishermen. He listened, however, and became convinced that a rapid decrease in catches of fish had taken place in the previous 15 to 20 years. Sounds familiar! A joint resolution of Congress gave Baird the task of finding out why. His early observations uncovered several possible causes. Among these were man's activities resulting in the pollution of water, in overfishing, and the improper use of fishing gear. Again, it sounds familiar! Looking at those events we find once again, that there is nothing new in this world, except, perhaps, how we respond to events. The response to those early events led to the formal establishment of the fisheries research laboratory here at Woods Hole in 1885. In the interven-

ing 100 years, fishermen certainly have not stopped talking, we in government still continue to listen and, as a result, the importance of the work conducted at the Woods Hole Laboratory has increased.

"One brainchild of Spencer Baird's was the first American vessel designed and built specifically for oceanographic work. Built in 1882 and commissioned in 1883, her name was *Albatross*; the vessel behind us is the fourth descendant to bear its name. During that first vessel's 40-year career, she added greatly to our knowledge of marine life. A number of research instruments devised by her captain, and other scientists on board, became models for much of the equipment used today. Baird pushed for her construction because he realized that the needs of the coastal fisheries would be better served by offshore research. He set exploratory fishing as a major early goal of the Commission and hoped that the *Albatross* would discover important new fishing grounds in the south Atlantic and the Gulf of Mexico.

"For the first 5 years of her life, the *Albatross* sailed out of Woods Hole. Her early missions were to investigate the effect of temperature, currents, and bottom conditions upon the presence and behavior of commercially important fishes. Another major objective of the ship's early cruises was to chart shoals and fishing grounds of unknown or doubtful location. In the process, we are told, she shattered many myths of elusive new fishing grounds fabled to be teeming with fish.

"Recalling the early years of the Woods Hole Laboratory and of the *Albatross* serves to remind us of the continuing need for fisheries research. Then, as now, such research was needed to support greater industry development of fishery resources. Today, there is even a greater need to manage fishery resources. Consequently, research needs have dramatically increased.

"The New England fishing industry began in earnest soon after the first colonists arrived. Fishing on Georges Bank began in the mid-1700's and was common by 1850 or so. By 1930, Georges Bank had become a traditional fishing ground for New Englanders with well developed fisheries. And over the next 30 years, until 1960, harvesting was relatively stable except for the interruptions of World War II. (Perhaps the managers of those days knew something that we don't.) After the war, new species were added to the landings as markets developed and in reaction to fish population changes. As a result, New England fisheries would never again be the same.

William G. Gordon

"In the early 1960's we saw the massive incursion of long-distance fleets from Europe and elsewhere. The long-distance fleets brought intense effort to bear upon all of the Georges Bank resources. The effects of this heavy fishing on traditional New England fisheries were a significant factor that eventually led the United States, late in 1976, to extend its jurisdiction over fisheries resources with the passage of the Magnuson Fisheries Conservation and Management Act.

"Against this background, we see that the focus of research at Woods Hole has always been conservation. Federally supported fisheries research began in the late 1800's in the United States. International cooperation began in 1921 when Canada, Newfoundland (which was an independent nation at that time), France, and the United States formed the North Atlantic Council on Fishery Investigations. Fisheries research expanded quickly with the start of the Georges Bank Haddock Research Program in 1932, again, fostered here at this Laboratory.

"After World War II, fisheries expansion accelerated and the need to conserve fishery resources again drew increasing attention. As a result, the International Commission for the Northwest Atlantic Fisheries was established in 1949, and international management and regulation of Georges Bank fisheries began to be implemented soon afterward.

"All of these changes resulted in more complex management regimes and led to increasing demands on fisheries science, a challenge to which the scientists at this laboratory responded. Scientific analyses were increasingly relied upon to explain changes in, and make predictions for, the resources and the impact of fishing; but the analyses often revealed new problems and complexities to contend with in conservation efforts. Increased emphasis was placed on development of fisheries statistics and the conduct of fisheries surveys and assessments which led the way to international and national programs to develop information for management. In the face of these needs, scientific research at Woods

Hole expanded in magnitude and scope.

"The ICNAF period was a learning period. Fisheries developed so rapidly that it was difficult to determine the effect on the stocks. The long-distance fleets often concentrated on single stocks and heavily pulse-fished certain areas. Disagreement existed on what effect this was having on herring and other fish stocks.

"The ICNAF response was a familiar one: further data and studies were required. It took many years of stock depletion to convince the Commission that the intensity of fishing would severely restrict future stock yields. It was about that time that I became associated with the Region as Regional Director and witnessed first hand the work that was being done here—pioneered here—on how to do the right type of research and how to apply it. I think we can be justly proud of that research. Most of the people here today, many faces that I recognize in the audience, were a part of that team.

"The lessons of ICNAF were not lost. In 1976, the Magnuson Fisheries Conservation and Management Act began a new era for New England fisheries. The challenge was not just to prevent history from repeating itself, but to rebuild the depleted stocks. Preliminary management plans were prepared to control foreign fishing activity until the new management system could establish itself. Now, however, the focus shifted from regulating foreign fishing fleets to regulating U.S. fishermen. Fishery Management Councils began preparing management plans. The earlier situation under ICNAF—government management with industry advice—was essentially reversed. One thing had not changed. Our scientists at Woods Hole were still in the middle of the action.

"I have given this brief history to provide a perspective, not only on the revolutionary changes we have experienced in the past decades, but also on the challenges we continue to face. As the inscription on the National Archives Building states, "The past is prologue." Perhaps the next 4,700 years, as Thomas Fulham has put it, will bring about even more changes. We have moved from the discouraging days of "pulse fishing" by massive distant-water fleets, through the initial euphoria of exclusive national jurisdiction, to the sober realization of the complexity of managing fisheries in a state of flux and change.

"The challenges we now face have many facets. U.S. and Canadian fishermen are now adapting to a new Atlantic Maritime Boundary. Both groups now find that their access is restricted to a smaller area, but both also find that their access is exclusive. It will take time for the two industries to make these adaptations, and it will take time for the two governments to consider how to insure appropriate and compatible management on both sides of the Boundary.

"Finally, I would like to touch briefly on an aspect of both our problems and opportunities. I refer to the increasing efficiency and productivity in recent years of both fishing fleets and individual vessels. This escalation of fishing power is a reflection of the great expectations in our domestic industry that followed the extension of national jurisdiction. We now know that these expectations cannot be satisfied by exclusive dependence on traditional resources. Thus, I am encouraged by the efforts I see along our Atlantic Coast to develop new fisheries for squid and other underutilized resources. Such resources offer important economic alternatives at a time when traditional fisheries must be rigorously managed.

"The larger challenge is to achieve a reasonable balance between the overall expectations of our fishing industries and the productivity of our resources. Thus, we must look broadly at all aspects of our fisheries, not just biological, but at the economic, social, and political factors. Fishing, in many respects, is like farming. The expectation is that there will be something for my son and I will pass a fishing boat on to him; just as in farming, the farmer wants to pass the farm on to his son. But, can that continue to exist?

"Once again, we find ourselves looking to the Woods Hole Laboratory to provide direction in meeting this challenge. I am confident that, as in the past, the challenge will be met, a tribute to Spencer Baird, a man who obviously had foresight.

"Allen Peterson touched upon another aspect, that the Woods Hole Laboratory, with the Center Directorship here, is not only a leader of regional research in the Northeast on the biological aspects, but must expand research to also include other aspects, such as assurances that the supply of seafood is safe and healthy to eat. I am most confident that the scientists and the leadership here will build upon the last hundred years and continue to meet the challenges that we all face, and some that we have not even identified or have yet been able to think through.

"I thank you for your indulgence, and would now like to take the opportunity to introduce the next speaker, my boss—I think, and he thinks, until the Senate confirms it—but I'm confident that that event will take place. He did not know anything about fish until 1981, and then he discovered that it was there to eat. Until then he had been a man with his head in the sky, way up there, in satellites and that sort of thing, because he was then a Deputy for the Space Agency. I remind him, from time to time, that if he would simply make sure that we got the money that it took to get to the moon, we could solve some of the problems we face, and it wouldn't take 4,700 years. Since Dr. Calio moved into the Deputy's job, he has learned a lot about fish. He is learning more; sometimes I feel he thinks he's learning too much, but nevertheless, I think he will be a fine Administrator for NOAA and will treat fisheries kindly as he leads that vast agency to address not only oceanic, but atmospheric concerns. Dr. Anthony Calio."