

FINAL REPORT

PROJECT TITLE: "Analysis of Domestic and Foreign Market Potential for
Fresh, Frozen and Smoked Rex Eel Products"

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Gulf & South Atlantic Fisheries Development
Foundation, Inc.

GULF & SOUTH ATLANTIC FISHERIES DEVELOPMENT FOUNDATION, INC.
COOPERATIVE AGREEMENT NO. NA90AA-H-SK007
CONTRACT NO. 40-08-25000/16109
AWARD PERIOD 12/01/89 THROUGH 05/31/91



* A report by the Gulf & South Atlantic Fisheries Development Foundation, Inc. to the National Oceanic and Atmospheric Administration pursuant to NOAA Award No. NA90AA-H-SK007. The views expressed herein are those of the author and do not necessarily reflect the views of NOAA or any of its sub-agencies.

FINAL PROGRESS REPORT

Grant No. NA90AA-H-SK007

Foundation Contract No. 40-08-25000/16109

Amount of Grant: Federal \$37,055 Match \$16,109 Total \$53,164

Project Title: "Analysis of Domestic and Foreign Market Potential for Fresh, Frozen and Smoked Rex Eel Products"

Grantee: Gulf & South Atlantic Fisheries Development Foundation, Inc.

Subcontractor: Florida Department of Natural Resources

Award Period: From 12/01/89 To 05/31/91

Period Covered by this Report: 12/01/89 To 05/31/91

I. Executive Summary:

This project was undertaken to ascertain market potential for rex eel food and industrial products. No market potential was found.

II. Introduction:

Rex eel (Ophictus rex) is a marine fish that ranges in the Gulf of Mexico from Florida to Texas. According to grouper-snapper fishermen, rex eel are found in nuisance quantities from the mouth of Apalachicola Bay to the mouth of Galveston Bay at 300-1,000 foot depths, 40-150 miles offshore.

Processing and taste tests conducted by the Sealestial Seafoods Company, at the Raffield Fisheries plant in Port St. Joe, FL during the 1986-88 period seemed to indicate that rex eel had market potential. The fish had a high edible yield (about 60%), the meat was lean and delectable, and the skins were thought to have potential as a raw material for leather tanning. The skeletal structure presented problems, but Sealestial Seafoods was developing processes to remove bones.

Producers' and processors' interest in developing a market for rex eel encouraged the Florida Department of Natural Resources to submit its proposal to the Foundation.

III. Purpose:

The goal of the project was to ascertain the market potential for various fresh, frozen and smoked rex eel products by having them evaluated and test marketed by a representative cross-section of domestic and foreign seafood, retail and foodservice companies.

The original work was very ambitious. Samples of fresh, frozen and smoked rex eel products would be furnished to food companies in the U.S., Canada, Europe and Asia for evaluation, and skins would be furnished to leather tanners for acceptability tests.

Unfortunately, the project was beset with delayed funding and logistical problems from the outset, therefore, only a small part of the work plan was accomplished.

IV. Approach:

Foundation funding for the project was delayed for about one year. During the delay, the Sealestial Seafoods Company went out of business. Sealestial was to have been our principal subcontractor in the project. It was the only company with rex eel processing experience and connections with fishing vessels prepared to harvest eels for the project.

Although Sealestial had been conducting experiments with rex eel in rented space in the Raffield Fisheries plant and had plans to form a rex eel processing partnership with Raffield Fisheries, it had not kept Raffield abreast of progress. Therefore, when funding for the project was finally released, the Bureau had to start from scratch.

Believing the funding delay would be a short duration and desiring to be ready when funds were released, the Bureau hired an international marketing consultant to start making contacts with potential buyers in Europe (Mr. Karl Hans Mau). Mr. Mau was instructed to start in Germany. He quickly lined up 18 companies who agreed to evaluate headless-gutted rex eel. The companies waited for their samples as the funding delay dragged on.

Months elapsed before funding was released and, in the interim, Sealestial Seafoods went out of business. When we asked Raffield Fisheries to pack and ship the samples to Germany, Mr. Raffield advised that Sealestial had left no records and that it would take time to locate fishermen interested in harvesting the needed quantities. Many weeks elapsed before Raffield was ready to make the shipments. Concerned that the German companies had by now forgotten their agreement to evaluate rex eel, Mr. Mau was instructed to re-contact the companies and alert them that samples were finally coming. Unfortunately, several more weeks elapsed before the shipments were made.

The time required to truck samples from the Raffield Fisheries plant in Port St. Joe to the international airport in Atlanta, GA made it difficult for Raffield Fisheries to participate in the

FINAL PROGRESS REPORT
Grant No. NA90AA-H-SK007
Contract No. 40-08-25000/16109
Page Three

project. To expedite future shipments, the remaining inventory of frozen rex eels was trucked from Port St. Joe to St. Petersburg and warehoused at Harry H. Bell, Inc.

Three shipments were made from St. Petersburg. Two shipments of skins were made to leather tanners in Juneau, AK and Toronto, Canada; and 50 pounds of dressed rex eel was shipped to Can-U.S.A. Fish Company, a minced fish products company in Toronto, Canada.

No more shipments were made as attempts to find domestic food companies interested in testing rex eel failed.

V. Findings:

There were no positive responses to rex eel samples!

The eighteen German companies responded negatively for various reasons; the primary one being the floating pinbones in the meat.

The Can-U.S.A. Fish Company in Toronto, Canada responded negatively because it claimed that meat-bone separation of rex eel would be too labor intensive.

The Canadian tanning company reported that the quality of rex eel skins was acceptable but that price was not competitive with similar skins available from Asian countries. The Juneau, Alaska tanner has yet to test the skins we provided.

The long funding delay and the failure of Sealestial Seafoods created problems that severely hampered the project. This damaged our credibility and was undoubtedly a factor in all the negative responses.

Further, when Sealestial Seafoods failed, work stopped on product development.

VI. Evaluation:

The original goals of this project were (1) to ascertain the market potential of various fresh, frozen and smoked rex eel products and (2) to expose the products to ethnic and gourmet users of seafood such as upscale oriental markets. For the reasons stated above, we were only able to furnish samples of frozen dressed eel and frozen skins to companies. No positive responses were received.

The project established that the unique skeletal structure of rex eel is indeed a major marketing obstacle. This was anticipated, but when the project was submitted, research was ongoing to reduce

the number of bones to an acceptable level. That research ended when the Sealestial Seafoods Company went out of business.

The results of this project should dissuade fishermen and processors from investing in rex eel until methods are developed to cope with the pinbones.

The Gulf & South Atlantic Fisheries Development Foundation will distribute copies of this report to trade associations, and they in turn to producers and processors they serve. We presume that companies and individuals will be cautious about investing in rex eel after they read the report.

The project established that there will be strong market resistance to rex eel in traditional market forms due to the presence of floating bones.

The private sector had invested 2 years and thousands of dollars in handling, storage and processing experiments with rex eel and was prepared to share in the cost of continuing processing and marketing research. It was appropriate for the Federal government and the Bureau to invest in a project that could have resulted in profitable utilization of a discarded seafood, increased income for fishermen and processors, and increased exports.

VI. Conclusion:

Due to the failure of the company that had the greatest investment and interest in rex eel, and due to the negative responses received from all the companies that evaluated rex eel samples, we conclude that there is extremely limited market potential for rex eel at this time.

Quincy Z. Jameson
Signature of Principal Investigator

August 30, 1991
Date

Peter R. Hoar
Peter R. Hoar, Project Director

August 30, 1991
Date

- A. Grant Number: NMFS Award No.: NA90AA-H-SK007
G&SAFDI NO: 40-08-25000/16109
- B. Amount of Grant: Federal \$25,000, Match \$16,109, Total \$41,109
- C. Project Title: Analysis of Domestic and Foreign Market Potential for
Fresh, Frozen and Smoked Rex Eel Products
- D. Grantee: Florida Department of Natural Resources
- E. Award Period: From 12/01/89 to 5/31/91 (including 6 months extension)
- F. Period Covered by this Report: 12/01/89 to 5/31/91 (Final Report)
- G. Summary of Results and Expenditures Attached

SUMMARY OF RESULTS AND EXPENDITURES

I. EXECUTIVE SUMMARY

This project was undertaken to ascertain market potential for rex eel food and industrial products. No market potential was found.

II. INTRODUCTION

Rex eel is a marine fish that ranges in the Gulf of Mexico from Florida to Texas. According to grouper-snapper fishermen, rex eel are found in nuisance quantities from the mouth of Apalachicola Bay to the mouth of Galveston Bay at 300-1,000 foot depths, 40-150 miles offshore.

Processing and taste tests conducted by the Sealestial Seafoods Co. at the Raffield Fisheries plant in Port St. Joe, FL during the 1986-88 period seemed to indicate that rex eel had market potential. The fish had a high edible yield (about 60%), the meat was lean and delectable, and the skins were thought to have potential as a raw material for leather tanning. The skeletal structure presented problems, but Sealestial Seafoods was developing processes to remove bones.

Producers' and processors' interest in developing a market for rex eel encouraged the Bureau to submit its proposal.

III. PURPOSE

- A. The goal of the project was to ascertain the market potential for various fresh, frozen and smoked rex eel products by having them evaluated and test marketed by a representative cross-section of domestic and foreign seafood, retail and foodservice companies.

It was anticipated from the outset that some companies would react negatively to the bones in rex eel loins, fillets and steaks. The animal has four sets of floating ribs (i.e. bones that are not connected to the backbone); a set lies diagonally in the center of each quarter loin and runs the length of the body. The plan was to ask companies to ignore these bones and simply evaluate the color, taste and texture of the meat; and advise them that processes were being developed to reduce the number of bones to an acceptable level.

- B. The original work plan was very ambitious. Samples of fresh, frozen and smoked rex eel products would be furnished to food companies in the U.S., Canada, Europe and Asia for evaluation, and skins would be furnished to

leather tanners for acceptability tests.

Unfortunately, the project was beset with funding and logistical problems from the outset and only a small part of the work plan was accomplished.

IV. APPROACH

- A. Foundation funding for the project was delayed for about a year. During the delay, the Sealestial Seafoods Co. went out of business. Sealestial was to have been our principal subcontractor in the project. It was the only company with rex eel processing experience and connections with fishing vessels prepared to harvest eels for the project.

Although Sealestial had been conducting experiments with rex eel in rented space in the Raffield Fisheries plant and had plans to form a rex eel processing partnership with Raffield Fisheries, it had not kept Raffield abreast of progress. Therefore, when funding for the project was finally released, the Bureau had to start from scratch.

Believing the funding delay would be of short duration and desiring to be ready when funds were released, the Bureau hired an international marketing consultant to start making contacts with potential buyers in Europe (Mr. Karl Hans Mau). Mr. Mau was instructed to start in Germany. He quickly lined up 18 companies who agreed to evaluate headless-gutted rex eel. The companies waited for their samples as the funding delay dragged on.

Months elapsed before funding was released and, in the interim, Sealestial Seafoods went out of business. When we asked Raffield Fisheries to pack and ship the samples to Germany, Mr. Raffield advised that Sealestial had left no records and that it would take time to locate fishermen interested in harvesting the needed quantities. Many weeks elapsed before Raffield was ready to make the shipments. Concerned that the German companies had by now forgotten their agreement to evaluate rex eel, Mr. Mau was instructed to recontact the companies and alert them that samples were finally coming. Unfortunately, several more weeks elapsed before the shipments were made.

The time required to truck samples from the Raffield Fisheries plant in Port St. Joe to the international airport in Atlanta, GA made it difficult for Raffield Fisheries to participate in the project. To expedite future shipments, the remaining inventory of frozen rex eels was trucked from Port St. Joe to St. Petersburg and warehoused at Harry H. Bell Inc.

Three shipments were made from St. Petersburg. Two shipments of skins were made to leather tanners in Juneau, AK and Toronto, Canada; and 50 pounds of dressed rex eel was shipped to Can-U.S.A. Fish Co., a minced fish products company in Toronto, Canada.

No more shipments were made as attempts to find domestic food companies interested in testing rex eel failed.

V. FINDINGS

- A. There were no positive responses to rex eel samples!

The 18 German companies responded negatively for various reasons; the primary one being the floating pinbones in the meat.

The Can-U.S.A. Fish Co. of Toronto, Canada responded negatively because it claimed that meat-bone separation of rex eel would be too labor intensive.

The Canadian tanning company reported that the quality of rex eel skins was acceptable but that price was not competitive with similar skins available from Asian countries. The Juneau, AK tanner has yet to test the skins we provided.

- B. The long funding delay and the failure of Sealestial Seafoods created problems that severely hampered the project. Months elapsed between the time we offered samples to food companies and delivered them. This damaged our credibility and was undoubtedly a factor in all the negative responses.

Further, when Sealestial Seafoods failed, work stopped on product development. Raffield Fisheries agreed to help us meet our sample commitments but had no interest in continuing the processing experiments that Sealestial had started.

VI. EVALUATION

- A. The original goals of this project were (1) to ascertain the market potential of various fresh, frozen and smoked rex eel products and (2) to expose the products to ethnic and gourmet users of seafood such as upscale oriental markets. For the reasons stated above, we were only able to furnish samples of frozen dressed eel and frozen skins to companies. No positive responses were received.
- B. The project established that the unique skeletal structure of rex eel is indeed

a major marketing obstacle. This was anticipated, but when the project was submitted research was ongoing to reduce the number of bones to an acceptable level. That research ended when the Sealestial Seafoods Co. went out of business.

The results of this project should dissuade fishermen and processors from investing in rex eel until methods are developed to cope with the pinbones.

- C. The Gulf & South Atlantic Fisheries Development Foundation will distribute copies of this report to trade associations, and they in turn to the producers and processors they serve. We presume that companies and individuals will be cautious about investing in rex eel after they read the report.
- D. This project established that there will be strong market resistance to rex eel in traditional market forms (loins, fillets, steaks) due to the presence of floating bones.
- E. The private sector had invested 2 years and thousands of dollars in handling, storage and processing experiments with rex eel and was prepared to share in the cost of continuing processing and marketing research. It was appropriate for the Federal government and the Bureau to invest in a project that could have resulted in profitable utilization of a discarded seafood, increased income for fishermen and processors, and increased exports.

VII. CONCLUSION

- A. Due to the failure of the company that had the greatest investment and interest in rex eel, and due to the negative responses received from all the companies that evaluated rex eel samples, we conclude that there is extremely limited market potential for rex eel at this time.