Section 21. Water a Common Enemy.—It is hereby declared that in said District, surface waters, which shall include rainfall and the overflow of rivers and streams, are a common enemy.

CHAPTER 59-994, Laws of Florida, 1959
DISSTON PURCHASE, 4,000,000 ACRES.

KISSIMMEE
LAND COMPANY.

200,000 ACRES BEST LAND IN FLORIDA.

KISSIMMEE CITY
TOWN LOTS FOR SALE.

ADDRESS—
W. T. FORBES, Manager,
Jacksonville, Fla.,

WM. CANNON, Agent, Kissimme, Fla.
Governor Broward & the plan to drain the Everglades- 1905-1909
YOU MAY HAVE THESE, IF YOU DRAIN AND DEVELOP THEM

MISS FLORIDA

FLORIDA
EVERGLADES
THEY CAME TO BOOST, BUT WENT AWAY TO KNOCK WHEN THEY FOUND THE GLADES NOT DRAINED AS PROMISED
TENTATIVE REPORT OF FLOOD DAMAGE
FLORIDA EVERGLADES DRAINAGE DISTRICT
1947
PARTIAL DEFINITE PROJECT REPORT

CENTRAL AND SOUTHERN FLORIDA PROJECT

FOR FLOOD CONTROL AND OTHER PURPOSES

PART I

AGRICULTURAL AND CONSERVATION AREAS

SUPPLEMENT 7 - DESIGN MEMORANDUM

PERMEABILITY INVESTIGATIONS

BY WELL-PUMPING TESTS

OFFICE COPY

ENGINEERING DEPARTMENT

CORPS OF ENGINEERS, U.S. ARMY
OFFICE OF THE DISTRICT ENGINEER
JACKSONVILLE, FLA.

FEB 16 1953

NOT FOR PUBLIC RELEASE  SERIAL NO. 20
Environmental crusaders
for Big Cypress-
Luna Leopold, Joe Browder,
Nathaniel Reed, Marjory
Stoneman Douglas, Art Marshall
The three Marjories

Marjory Stoneman Douglas

Marjorie Harris Carr

Marjorie Kinnan Rawlings
BIRD'S EYE VIEW
Of the canal across Florida from the Gulf of Mexico to the Atlantic Ocean, as it will appear when completed.
Red Tide Dates Back to 1800s; Booklet Gives Fact and Fiction

NAPLES — The story of the fish killing red tides, still an unsolved mystery after 100 years of occurrence in Southwest Florida, is told in a new booklet that will be published by the Naples U.S. Fish and Wildlife Service laboratory, established to fight the plague.

Entitled "Red Tide Fact and Fiction," the folder will be given free to those who write or call at the Naples station, John C. Bugno, public relations director, for the 40-man staff here, said it is being prepared because of the great public interest in red tides and to answer the numerous inquiries constantly received here.

The booklet is illustrated with drawings of the red tide organism and a map of Naples from the 1920s to show the limits of which it has been found. Following is the text of the flyer:

Red tide is the popular name attached by newspapers and other media to a series of mass fish kills off the lower Florida West Coast associated with the presence of a tiny marine organism known as Gymnodinium delessoi.

Muddy Water

Red tide waters are neither red nor directly associated with fish kill action. The term came from observation of the prudently, reddish reflection of the sun's rays as they hit water laden with a great concentration of G. delessoi, the red tide "bug."

This bug, which is thought to be present along the coast in small numbers most of the time, is part plant and part animal. It was first identified in 1947 after a severe outbreak killed many fish and attracted popular scientific interest the world over.

In Florida, red tide is considered as a natural occurrence, for two reasons: It is classified scientifically as a dinoflagellate, named for two small flagella, one wrapped string-like at its mid-section and the other extending like a tiny tail from its soft body, or cell. With the latter it can propel itself for short distances, but it depends on currents for long distance travelling.

Scientists studying red tides believe, and are now gathering supporting data, that when the bug reacts to a combination of weather conditions causing it to multiply or bloom it releases a chemical poison in the water which acts as a poison, partially paralyzing the fish and salt water animals in the area and causing their death.

Questions and Answers

Q. Is red tide something new to the Florida coast?
A. No. Reports of conditions indicating red tide date back to the early 1800s. It was not until 1947 that population had increased along the coast to warrant a full scale study of red tide.

Q. Is red tide found in other sections of the world?
A. Fishes of both red and occasional fish kill have been found elsewhere but are not believed related to red tide as we know it.

Q. Is the organism visible in the water?
A. No, it is as small as it can be studied only with a powerful microscope. Less than a thousandth of an inch across, the bug has been located in quantities of more than 60 million per quart of water during a fish killing "bloom."

Q. How is it studied?
A. The Naples staff constantly collects water samples from some 21 spots along the Gulf and railroad exchange cars from three different railroads to the laboratory which are carefully checked for the "bug" and for traces of the elements which promote its development. At the Galveston, Texas, laboratory of the service it has been placed in culture for long experiments so that it may be studied in laboratory surroundings.

The name red tide came from observation of the reddish reflection of the sun's rays as they hit water laden with a great concentration of G. delessoi, the red tide "bug."

This bug, which is thought to be present along the coast in small numbers most of the time, is part plant and part animal. It was first identified in 1947 after a severe outbreak killed many fish and attracted popular scientific interest the world over.

1. The red tide bug is thought to be present in small numbers most of the time which causes it to reach harmful proportions.

We believe that certain physical and rainfall conditions cause sea nutrients to mix with the water and promote development of the bug. When this occurs, single bug divides and the two bugs form a ring around sich so that as few as 25 divisions the original bug has developed into more than 20 million bugs.

We have found a cure. A. None. It is natural for the bug to bloom in the water but we do not believe we can cure red tide by eliminating all the bugs. We hope to control red tide by predicting when and where an outbreak may occur so that the area involved can be treated with chemicals which will prevent development of the bug in fish killing proportions.

Q. When will you be able to make these predictions?
A. We have stated that within three years we believe we will that the area involved can be treated with chemicals which will prevent development of the bug in fish killing proportions.

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Q. When will you be able to make these predictions?
A. We have stated that within three years we believe we will
+ 2 meters

USA: Florida

Weiss and Overpeck
The University of Arizona
IT'S STILL Paradise