

1970  
release date

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# THE GREEN SEA TURTLE



From the film series

THE UNDERSEA WORLD  
of JACQUES COUSTEAU

The Undersea World of Jacques Cousteau Series:

CORAL JUNGLE  
DESERT WHALES  
500 MILLION YEARS BENEATH THE SEA  
THE FLIGHT OF PENGUINS  
THE GREEN SEA TURTLE  
LAKE TITICACA  
THE NIGHT OF THE SQUID  
THE RETURN OF THE SEA ELEPHANTS  
SEALS  
SHARKS  
THE SINGING WHALE  
SUNKEN TREASURE  
THOSE INCREDIBLE DIVING MACHINES  
THE TRAGEDY OF THE RED SALMON  
THE UNSINKABLE SEA OTTER  
THE WATER PLANET  
WHALES

*A study guide for the film*  
**THE GREEN SEA TURTLE**

*Uses:* For public library programming with  
adults and young adults.  
For science classes: JH, SH, C.

*Lengths:* Short version, 21½ minutes  
Long version, 54 minutes

**CREDITS:**

Jacques-Yves Cousteau, world famous oceanographer and critically acclaimed cinematographer, is the author of this film series. As coinventor of the aqualung in 1942, Jacques Cousteau has since made immeasurable contributions in the study of the sea. He holds the personal creative honor award of Cannes, and is the sole nonscientist appointed to the National Academy of Science. Three of his films have won Academy Awards.

Ronald B. Linsky, program consultant for this film series and Coordinator of the University of Southern California's Sea Grant Advisory Services.

Rod Serling, narrator.



## SYNOPSIS

Green sea turtles are found throughout the tropical world. During certain times of the year they return to specific islands or beaches to lay their eggs. As they struggle out on the sand, they are extremely vulnerable to turtle hunters who catch them for food. When the young turtles hatch, they are subject to attack by many predators as they make their way across the beach and into the sea.

## BACKGROUND INFORMATION

One of the greatest unsolved mysteries of the world of nature is the uncanny ability of some animals to return to the place of their birth. Most people are familiar with the fact that salmon return from the sea to the same rivers where they were hatched. Few people know that the green sea turtle apparently has the same homing instinct as the salmon.

The eggs of the green sea turtle are laid in the sand above the high tide line. After hatching, the baby turtles head toward the sea, enter the surf and swim away from land. From that point on, no one is quite sure where they go. Tagged turtles have been found thousands of miles from the place where they were originally tagged. Yet, when the time comes, the female somehow finds her way back to tiny islands or other familiar beaches to lay her eggs.

Various methods have been used by biologists to try to trace the path of these turtles. Tagging the turtle with a metal tag which asks the finder to return the tag to the biologist has been the most successful way so far.

Several other techniques have been tried but with slight success. Helium-filled balloons on long lines are sometimes attached to the turtles so that they may be tracked by observers. Radio transmitters have been attached to the turtles' backs but with little success. Floats have also been fastened to the turtles but these floats are not easily seen from a boat in rough water. As a result of these tracking difficulties, no one has been able to clearly establish how the turtles navigate or where they go as young turtles.

The female green turtle may weigh as much as 300 pounds. She comes ashore, drags herself up on the beach with great difficulty, digs a hole and lays about 100 eggs. She then covers the hole with sand and heads back for the water. Here again, although the female may be out of sight of the ocean, she almost always seems to be able to find her way back to the surf.

Part of the interest in the green sea turtle lies in the fact that it is a species threatened with extinction. For hundreds of years the turtle has been hunted for food. Turtle soup was a great delicacy in England when that country was at the height of its sea power. Sailing vessels on long voyages would stop at islands where turtles were known to be plentiful and thousands were killed for fresh meat for the crews. Today the number of turtles seems to be diminishing and it is for this reason that scientists such as Cousteau are attempting to study its habits.

## INTRODUCTION AND OVERVIEW

The mysteries of the ocean's depths have intrigued the minds of man since his early beginning. Even today many people believe that tremendous fearsome monsters inhabit the deep blackness of the submarine world. For the past few years, for instance, men with cameras have maintained a constant watch on Loch Ness, a deep bay in Scotland, hoping to get a photograph of the fabled Loch Ness Monster.

Legends of the lost continent of Atlantis and the sunken civilization of Mu have been a part of our lore from the dim past. Recently, sunken cities have been found in the Mediterranean Sea, destroyed by rising water or sinking, unstable land. This process is still occurring. Parts of the city of Venice, Italy, are slowly sinking and the waters of the sea are running over the marble floors of once beautiful palaces.

It has been said that we know more about the moon than we know about the undersea world that exists on our planet. The difficulties of undersea exploration were almost insurmountable until our modern technology made it possible to lower men and instruments into the crushing pressure and endless cold of the depths. When a man sinks one inch under the surface of a body of water he is in an alien environment and can exist but a few moments without artificial life support systems. A few people, such as pearl divers, can hold their breath and swim down as much as fifty feet, but they soon must return to the surface. Modern scuba gear enables a human to go as deep as three hundred feet and stay under the surface for hours. Yet three hundred feet is only the topmost part of the ocean. There are great marine trenches that are over six miles deep.

Jacques-Yves Cousteau is one of the foremost modern explorers of the undersea world. His interests run from studying marine animals such as the shark, the whale and the sea turtle, to hunting sunken treasure and looking for lost cities. In addition, he is constantly researching new diving techniques to further his explorations.

This series of films is a mini-course on undersea exploration. It includes a cross section of techniques used and some of the exciting findings of the Cousteau explorations.



Because of the food value of the turtle, man may one day establish turtle hatcheries in much the same way that he now builds salmon hatcheries to insure an ever-renewing supply.

The green sea turtles are but one of five major kinds of turtles found today in the world's oceans. They are better known than the loggerheads, ridleys, hawksbills or leathernecks, and for centuries their worldwide use as a food source has accounted for their popularity.

Sea turtles are characterized by a broad flat body encased in an upper (dorsal) shell called the carapace, and a lower (ventral) shell called the plastron. Their limbs have been modified into paddle-like flippers, with the front ones used for locomotion. Because their skulls are so large they are unable to withdraw their heads into their shells. Turtles lack teeth, but their jaws form sharp ridges which end in a formidable horny beak.

#### LEARNING OBJECTIVES

After viewing the film and reading the study guide, the students will be able to:

1. Name two predators that attack green sea turtles.
2. Describe in a paragraph the nesting habits of the female turtle from the time she leaves the sea until she returns.
3. Discuss the efforts being made to save the green sea turtle from extinction.
4. State two methods used to trace the turtles' migratory routes.

#### EVALUATION

Have the students:

1. Name two predators that attack green sea turtles.
2. Describe in a paragraph the nesting habits of the female turtle from the time she leaves the sea until she returns.
3. Discuss the efforts being made to save the green sea turtle from extinction.
4. State two methods used to trace the turtles' migratory routes.

#### SUGGESTED ACTIVITIES

Have the students:

1. After consulting several resources, locate on a map the major nesting ground of the green sea turtle.
2. Compare and contrast a typical turtle and a typical tortoise.
3. After researching the literature available, list the various products derived from the many species of sea turtles.
4. Trace the established migratory routes of the Caribbean green sea turtles, the Brazilian species and the Madagascar variety.
5. Read *So Excellent a Fish* by Archie Carr (Doubleday & Company, Inc.) for a more detailed study of the green sea turtle.

#### VOCABULARY

aquaculture  
carapace  
extinction  
migration  
plastron  
predator  
prey  
tortoise  
turtle

#### REFERENCES BOOK

Carr, Archie. *So Excellent a Fish*. New York: Doubleday & Co., Inc., 1967.

#### MAGAZINES

Carr, Archie. "Great Reptiles, Great Enigmas; Sea Turtles." *Audubon*, March, 1972, pages 24-35.

Carr, Archie. "Green Sea Turtle in Peril." *National Parks and Conservation*, April, 1970, pages 19-24.

"Struggle to Save the Sea Turtle." *Life*, June 18, 1969, pages 54-57.

Churchill Films  
662 North Robertson Blvd.  
Los Angeles, Ca. 90069

Film  Title: THE GREEN SEA TURTLE  
 Videotape  Producer: THE UNDERSEA WORLD OF JACQUES COUSTEAU- CHURCHILL FILMS  
 Reviewer: George H. Balazs Dept.: HTMR Date: 2/13/78

Please circle  
 Faculty  
 Staff  
 Student  
 Other

TO THE PREVIEWER: Faculty evaluations determine the purchase of films. Films utilized in large classes, used in several courses or sections, and films with interdisciplinary use receive high priority (1st). Those films which are more specialized and have fewer potential uses or smaller potential student audiences receive 2nd priority and are purchased if additional funds are available. Other factors determining priority are:

- |  |  |
|--|--|
| 1. Probable useful life                    | 4. Availability from other local sources |
| 2. Balance within existing film collection | 5. Availability of similar films         |
| 3. Purchase price vs. rental               | 6. Budget limitations                    |

(Highly specialized films can also be obtained by departments through their own funds or through their book allocations from the Library.)

1. I ~~would~~ would not use this film in my <sup>lectures.</sup> ~~classes.~~

2. Classes which would use this film:

<u>Course name and number</u>	<u>No. of uses per year</u>	<u>No. of students involved each year</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Other departments, programs, or courses which might use it: \_\_\_\_\_

3. What does the film say? (Write what would be for you an adequate catalog entry.)

portrays an erroneous view of the extent <sup>and circumstances</sup> of natural predation on hatchling green turtles by frigate birds

4. Your rating:

	<u>Less Than Satisfactory</u>	<u>Satisfactory</u>	<u>More Than Satisfactory</u>
1) Application to your subject area	<u>X</u>	_____	_____
2) Accuracy and authenticity	<u>X</u>	_____	_____
3) Organization and continuity	<u>X</u>	_____	_____
4) Ability to attract and hold interest	_____	<u>X</u>	_____
5) Suitability for collect <sup>ed</sup> & university level	<u>X</u>	_____	_____
6) Quality of picture	_____	_____	<u>X</u>
7) Quality of sound	_____	<u>X</u>	_____

Comments on film: excellent film footage of turtles, however narration contains inaccuracies which make the presentation scientifically unacceptable for teaching or general interest viewing purposes



- other persons who viewed films

Eckert  
Pfund  
Walters

"No one knows how they sense the ocean"

Europa - 4 million hatched per year

"Farming"

"Aquaculture" - Turtle showing the way

Turtles shown - ① Brown carapace ② black carapace

Hind limbs appear long; front limbs appear wide.

- subtle differences seem to exist in shape of turtle's body. also behavior as per covering activity with hind flippers - didn't seem to pull sand immediately over egg clutch -

Notes that roots, woody vegetation entrap turtles - can't reverse.

also some turtles turn and head inland - no apparent reason.

Lots of hermit crabs, like Canton.

Hydrogen filled balloons used - drilled carapace PC.

note - H<sub>2</sub> depth from line.

- hatchling predation by Frigates - daytime

- hatchlings look flat

Frigates also took hatchlings when they surfaced to breath.

"Unless they hatch at night when Frigates can't see them"



# University of Hawaii at Manoa

Instructional Resources Service Center  
Kuykendall Hall 107 • 1733 Donaghoe Road  
Honolulu, Hawaii 96822

January 30, 1978

MEMO TO: Department of Zoology, Chairman  
 Department of Oceanography, Chairman  
 Department of Biology, Chairman  
 Dave Eckert, Marine Advisory Program  
 Marine Options Program, Chairman  
 Sea Grant Program, Chairman

FROM: Richard A. Sanderson, Media Specialist  
 Instructional Resources Service Center.

SUBJECT: Film(s) available for Preview

The film(s) listed below were ordered for preview and evaluation by your department and have recently arrived. They will be in our offices, available for preview scheduling, from 1/30/78 to 2/17/78.

Call our office at 8075 to arrange for a preview session in our facilities, or you may arrange to schedule the film(s) to take out and use in a class session. Evaluations and reactions from students can be valuable information in determining whether a film should be purchased.

The possibilities of the film(s) being purchased depend on funds available and on the written evaluations submitted by faculty previewing the film(s). Forms for such written evaluations are available when the film is previewed or picked up for use outside our offices.

We would appreciate your notifying any colleagues who may also be interested in the film(s). Thank you.

The Film(s):

CORAL JUNGLE  
GREEN SEA TURTLE, THE  
 SHARKS

RAS:gdl

*George -*  
~~*George*~~  
*you might want to preview this.*  
*- Bruce*