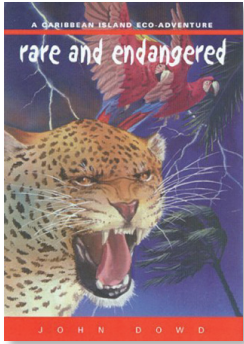


TEACHER'S GUIDE



Rare and Endangered

Written by John Dowd

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Ages 11–15 | Realistic Fiction
AR • RC • Lexile • GRL X; Gr 6

ABOUT THE BOOK

In this sequel to *Hogsty Reef*, teenagers Jim and Julia reunite in the Turks and Caicos Islands to work in a research station studying endangered wildlife. While on the island, Jim and Julia are on a turtle-tagging mission along the eastern drop-off of the sandy Caicos Banks. Their efforts go as planned until they come upon violent poachers, who end-up abducting them. In the meantime an eccentric naturalist disappears and a violent hurricane is brewing offshore. Young adult readers will become absorbed by Dowd's vivid description of the tropical landscape.

THEMES

Family relationships and grief | Personal responsibility
Loyalty and trusting friends | Habitat protection
Endangered animal trade | Survival

BEFORE YOU READ

Ask students to think about and discuss the following questions and issues:

- How might you react if one of your parents should die in a terrible accident? Do you think your feelings toward your surviving parent would change? In what ways do you think it would or would not change?
- How do you think you would be treated by the surviving parent? Do you think you would have more or less freedom than you had before the accident?
- Do you think it is okay for some zoo's and pet stores to buy animals from people who mistreat animals for profit? What would you do if you knew this was happening?
- How many different species of turtles do you think

there are? Where do they live? How big do you think some of the turtles can get? How many years can some of the turtles live? Have you ever had a pet turtle? What species of turtle did you have? Where did you get your turtle from?

- Do you know what a "black market" is? What do you think is sold on the black market? Do you think you can find animals being sold on the black market? Where would you find a black market?

AS YOU READ

Ask readers to think about and discuss the following questions and issues:

CHAPTER 1

- Where do you think Jim considers home: Vancouver, British Columbia, or the Turks and Caicos Islands? Why? For how many summers has Jim worked in the Caicos Islands for George?
- What is the difference, do you think, between eco-tourism and eco-adventure? Why did the author, John Dowd, call this book an eco-adventure?
- How can an electron microscope detect minute traces of pollutants? What did they study for pollution levels?
- What do you think a marine biologist's job would be like? What was Jim's response when Gabriel asked him if he was thinking about marine biology when he graduates from high school? Why do you think Jim answered the question the way he did?
- What was Carlin's assignment at the research station for the summer?

- How do you put a radio transmitter on a giant sea turtle? Why is that important?

CHAPTER 2

- Explain what and why Carlin was doing with the baby turtles. Which of the turtles were rare and endangered?
- What did Jim eat on Hogsty Reef that made Carlin furious at him?
- Where in the Caicos Islands did the green turtles lay their eggs?
- Define dorado, and why it is significant to the story? Find an illustration.
- Why did Jim love maps? Why do you think the descriptions of the various types of maps were important to the story?
- Which island provided quiet beaches where sea turtles traditionally crawled ashore to lay their eggs?
- Which country is still considered a thriving market for turtle meat and eggs?
- What was the significance of the train depot dream that Jim had of his father?

CHAPTER 3

- Explain what a “mangrove” forest is. Why is it important to the world’s ecosystem? Define and explain heron, salt marsh, sand shark, mud crabs.
- Which direction were Jim, Julie and Carlin headed as they left the research station?
- Which animal did Jim think should have been a brighter pink?
- Where did Miles live and why? What did he study? Why was it significant, do you think, that Carlin would make the observation that fishermen in the area go barefoot, they do not wear boots?

CHAPTER 4

- What is the “Bermuda Triangle”? And why does it irritate Jim to be reminded of that fact?
- Describe what a lignum vitae tree is. Why is it important to the natural landscape of the Caicos Islands? What is a sisal plant? What is a flame tree?
- What did Carlin see at Ambergris Cay at night that she could not or would not see in Los Angeles at night? Explain why.
- What species of turtle did they first observe? How old is this species of turtle?
- How long did it take for the turtle to build its nest? How many eggs did the turtle lay?
- Why was the turtle dangerous to Jim and Julie,

according to Carlin? How heavy was one of the turtles they had tagged?

- Where did Carlin place the tag on each of the turtles? What did the tag have on it? How did they place the transmitter on the turtles? Where on the turtle did they place the transmitter? How big was the transmitter?
- When the transmitter’s were turned on, who was listening and where?

CHAPTER 5

- What species of shark scared Jim, but Julia said was harmless?
- What does Jim see when he swims in the water?
- What did George find in the water? What did he do with it?

CHAPTER 6

- In chapter 6, page 65, Julia asks Carlin, “How come turtles are endangered if they have so many babies?” What was Carlin’s explanation to Julia’s question?
- What was the color of the sky that worried Jim so much? Why?

CHAPTER 7

- What was “glistening like a glacial boulder in the moonlight”? What was its significance to the story up to this point?
- What is a poacher? What were the poacher’s doing at Ambergris Cay? Where did the poachers come from?
- What relationship did Carlin see between the actions of the poachers and her living in Los Angeles? Why was Jim spending so much of his time in the Caicos Islands during the summer months? Why do you suppose Jim felt that way?
- What alarmed Julia so much as they made their way back to the research station? Why?
- Who were they looking for through the mangrove forests? What did they see that troubled them so much?
- What do poachers do with flamingos? How much does a mating pair of flamingos sell for on the black market? What does this activity have to do with Miles?
- What is a kayak? And how did Jim and Julia become experienced in using a kayak?
- Why were Jim and Julia using a kayak to find Miles?

CHAPTER 8

- What did Jim and Julia find at the dock that made

them shudder?

- Who was Perro Loco, and why did Carlos tell Jim and Julia that they would not want to be with him?
- Who escaped capture and summoned help from the research station? Were you surprised by this? Why?

CHAPTER 9

- What dead animals did Jim and Julia see at the poacher airport? And why was Miles responsible for this carnage according to Carlos? How much money did the poachers lose according to Carlos?
- What endangered cats, native to Central America, were captured by the poachers?
- How were the parrots stacked in the poachers' warehouse? What are crimson macaws? Why did it anger El Jefe to see them dead?
- Who else did he see in a cage? Was this a surprise to you? Why? And why did the workers almost drop his cage while being loaded on the plane?

CHAPTER 10

- Why is George surprised to see an aircraft?
- What clues do George and Gabriel find? What do they mean?
- What does "DR" stand for? Who do you think scratched it?

CHAPTER 11

- What was the reason for the cages being thrashed around aboard the poachers DC3 aircraft? What was the end result of the cages swinging open?
- How did the transmitter on the dead hawksbill turtle lead to the location of Jim, Julia and Miles? Where were they?
- Where is the hurricane headed?

CHAPTER 12

- What country did El Jefe mention that he could sell Julia for more money than the jaguar? Do you think El Jefe was joking with Jim when he said this? Why or why not?
- How and what did Julia use to free herself from the cage?
- What was Miles' previous life that amazed Jim? What was Miles' reaction to Jim's astonishment?
- Why did Miles allow himself to be captured by the poachers since he was a trained SAS man? Where did Miles learn to understand Spanish?

CHAPTER 13

- Where do Jim, Julia, and Miles hide from the storm?
- Where did Miles go to school? Why is this helpful?
- What incriminating document does Miles find? Why is this useful?

CHAPTER 14

- Who rescued George, Andreas and Gabriel from the police station? How did he do it?

EPILOGUE

- Which court, according to Carlin, will hopefully prosecute the poachers? Why did she think that?

CLASSROOM ACTIVITIES

ACTIVITY 1

On a map of the Caicos Islands, similar to the one in the book, outline in color, the turtle nesting beaches that Carlin was to study.

ACTIVITY 2

On the map label the area that the green turtles lay their eggs. Circle South Caicos Island and label it as "Turtle Tagging Area".

ACTIVITY 3

Outline the country, in red, that still has a thriving market for turtle meat and eggs?

ACTIVITY 4

Trace the route that Jim, Carlin and Julie were going to take to get to the turtle nesting areas. Identify the location of the research station on the map.

ACTIVITY 5

On the map, place a circle that is a part of the "Bermuda Triangle". For an extended activity, trace an outline of the Bermuda Triangle and list the islands that the triangle covers.

ACTIVITY 6

On the map, circle the town of Monte Cristi, Dominican Republic.

AFTER YOU READ

- Why do you think the trade in rare and endangered animals is still thriving? Why is the Dominican Republic, according to the author, one of the countries that still harvest turtles for their meat?

- Are there laws that protect the illegal importation of rare and endangered animals like the macaws, jaguars, flamingoes, and others?
- Do you think technology can be used to help protect endangered species from poachers? How?

ACTIVITY 1

- Find the “Bermuda Turtle Project” (BTP) and follow the link. Find an area of interest to you concerning the BTP. Write a short story using some or all of the characters from Rare and Endangered. Have the characters explain what is happening to the turtles today in the Caribbean and what they should do to stop it.
- Alternative Activity: Have the students write a short play based upon the characters of Jim, Julia, Miles, Carlin and George. Have the characters decide on what they should do, or not do, based upon the latest findings of the BTP project. Have the students perform the play to their fellow students from other classes (science, social studies, etc).

ACTIVITY 2

Use the Internet to research and answer the following questions:

- 1) What are the threats faced by marine turtles?
- 2) How many countries have agreed to offer turtles protection and their eggs on their beaches?
- 3) What countries can you find products made from the Hawksbill turtle in their airport shops?
- 4) How many tons of Hawksbill shells has Cuba accumulated since April 2000?
- 5) Which six countries/territories “maintain an open season for taking turtles from their waters”?
- 6) Identify the six countries/territories on a map and outline in red.

ACTIVITY 3

Go to the following website:

http://bigcats.care2.com/r3_fun2.html

From this or any other websites listed, or not, find additional interesting and fun (yes, the Caribbean is known to be a fun place to visit!) information about the Caribbean Area and the Caicos Islands. Put together a multimedia presentation using PowerPoint software that discusses the political, environmental, economic and social aspects of the region. For example: If you were to take your family or friends to the Caribbean or to the Turks & Caicos Islands, where would you go, what would you like to see, what would you like to do?

INTERDISCIPLINARY CONNECTIONS

MATH

- Discuss the importance of “scale” before using any map.
- Find the distance between (miles/kilometers) the station at Clarke’s Cut and Ambergris Cays. Find the distance between Ambergris Cays and Monte Cristi, Dominican Republic. Use the maps found at the National Geographic website. Why weren’t you able to determine the distances with the Caicos Islands map in the *Rare and Endangered* book?

ART

Find photographs of the Caribbean Region from various websites. The National Geographic website at: www.nationalgeographic.com/ would be a good start. Paste pictures that you think will make a great addition to the storyline of *Rare and Endangered* using PowerPoint. Explain why you chose the pictures and their connection to the storyline.

MUSIC

Research the type of music that is popular in the Caicos Islands. Explain what “ripsaw” music is, and name the instruments used in performing this type of music. Would Marcel be familiar with this type of music? Why? Would Jim and Julia likely to hear ripsaw music on their popular radio stations in Vancouver, British Columbia? Why or why not? Explain what “junkanoo” music is about. Name some musicians that are popular artists with his genre of music. Do you think music is important to the “identity” of the Caribbean people? Explain your answer.

TECHNOLOGY

- Discuss the use of technology that was employed by Carlin to keep track of the turtles.
- Discuss in terms of “of the shelf technology” as the latest developments in Global Positioning Satellite Systems (GPS) which anyone can use or abuse.
- In *Rare and Endangered* the poachers used a DC3 aircraft. What is the history of the DC3 aircraft? How many years has it been flying? Why would it be used by poachers?

PSYCHOLOGY – Grieving and Social Behavior

Some of the stages of grief include anger, denial, guilt, and acceptance. What stage in the grieving process is Jim, early in the book? What step is he towards the end of the

book? Are they different? Are they the same? Provide examples from the text to support your conclusions. Why did Jim say that if he had not spent time with George and Julia on the Caicos Islands, he would have had problems with the law, at home, in Vancouver, British Columbia?

SOCIAL STUDIES – Economics

Use the Internet to research and answer the following questions:

- 1) What is the economy of the Turks & Caicos Islands based on?
- 2) How many visitors did the Islands have by the late 1990's? How many from the United States?
- 3) What has been the trend in tourist trade at the beginning of the 21st Century? Why do you think this has happened?

SOCIAL STUDIES – Geography

Use a map to answer the following questions:

- 1) What is the ocean depth of Ambergris Cay?
- 2) Which country claims possession of the Turks & Caicos Islands?
- 3) What is the longitude coordinate for the Caicos Islands? From a larger scale map find the latitude coordinate
- 4) Which direction did the characters in the book travel from when they started from the Research Station to Ambergris Cay?
- 5) Which passage did they most likely take to get to Ambergris Cay? Why?

SCIENCE – Ecology

- List the reasons why the sea turtle, macaw, flamingo, jaguars, ocelots, etc. that have habitat within the Caribbean Area are in danger. List the species of plants and animals that are also facing extinction in the Caribbean Area. Answer this question: "How the policies of some Caribbean nations/territories have contributed to this poaching problem?" Go to www.nationalgeographic.com/animals/ to start your search.

SCIENCE – Weather and Climate

- List the various types of weather phenomena discussed in *Rare and Endangered*. Why do you think it is important for traveler's to the Caribbean region to have up-to-date information on weather conditions? Go to the National Oceanic and Atmospheric Administration website (NOAA): www.noaa.gov/

- Answer the following questions:
 - 1) How many hurricanes have passed through the Caicos Islands since 2000?; through the Caribbean?
 - 2) What is the current weather forecast for Providenciales, the city closest to the research station.
 - 3) What is the average temperature for Providenciales during the summer and winter seasons?
 - 4) What mistakes, if any, did Jim make, according to George, concerning the weather?

ABOUT THE AUTHOR

John Dowd is a true adventurer, as well as a writer and photojournalist. He has worked as a seaman on a Danish freighter out of Libya; taught at New Zealand's Anakiwa Outward Bound School; paddled from Punta Arenas to Puerto Montt in Chile on assignment for *National Geographic*; and established himself in the *Guinness Book of World Records* by leading a 3600 kilometer kayak expedition from Venezuela to Miami along the Caribbean island chain. He is the author of *Hogsty Reef* and *Rare and Endangered*. He lives in Canada.



Peachtree Teacher's Guide for
RARE AND ENDANGERED
prepared by Layne Smith

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