

# SCIENTISTS IN THE FIELD

WHERE SCIENCE  
MEETS ADVENTURE

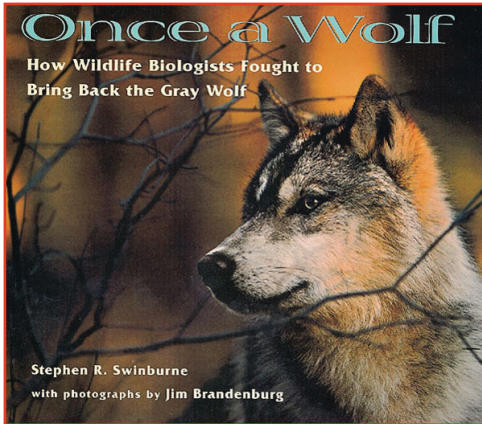
DISCUSSION AND ACTIVITY GUIDE

*Once a Wolf: How Wildlife Biologists Fought to Bring Back the Gray Wolf*  
by Stephen R. Swinburne Photographs by Jim Brandenburg



### *About the Series*

*Once a Wolf: How Wildlife Biologists Fought to Bring Back the Gray Wolf* is part of the award-winning Scientists in the Field series, which began in 1999. This distinguished and innovative series examines the work of real-life scientists doing actual research. Young readers discover what it is like to be a working scientist, investigate an intriguing research project in action and gain a wealth of knowledge about fascinating scientific topics. Outstanding writing and stellar photography are features of every book in the series. Reading levels vary, but the books will interest a wide range of readers.



*Once a Wolf: How Wildlife Biologists Fought to Bring Back the Gray Wolf*  
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### *About the Book*

Swinburne reviews mankind's often hostile relationship with wolves through history and describes the early conservation efforts. He then describes the efforts to reintroduce wolves into Yellowstone National Park and ongoing research projects to understand this important species and its pivotal role in nature's balance.

### *About the Author*

Stephen Swinburne was born in England and moved to America when he was a boy. His family moved a lot, and he took refuge in writing in his journals and listening to music. Stephen always wanted to be an adventurer, a naturalist, or a marine biologist, and he graduated from Castleton State College with a degree in biology and English. He worked as a ranger in several of our national parks and now writes and takes photographs for children's books. Stephen loves to travel, read, sing, play his guitar, garden, and take pictures. He and his wife live in Vermont.

### *About the Photographer*

Jim Brandenburg has received many awards for his photography, including Magazine Photographer of the Year from the National Press Photographers Association, Kodak Wildlife Photographer of the Year, and a Lifetime Achievement Award from the North American Nature Photographers Association among others. Jim has traveled the world as a *National Geographic* photographer and has also worked as an author, producer, director, and cinematographer. He and his wife live in Minnesota.

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## ONCE A WOLF

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*Pre-Reading Activity*

Find the scientific names for wolves and dogs. Make sure you understand what the genus and species part of a scientific name implies. What do these scientific names for wolves and dogs imply? Why is a dog “man’s best friend” and a wolf an animal we pay to have exterminated?

Recently the state of Michigan passed legislation to allow hunters the chance to kill wolves in the Upper Peninsula. Wolves are just one animal whose numbers have rebounded sufficiently to remove them from the endangered species list. Take a look at the number of wolves today versus the number of wolves in 1999, when this book was published. What factors germane to wolves have changed in the last fifteen years?

Make a list of other animals that have been removed from the endangered species list. What put these animals on the endangered species list initially? What factors contributed to the increased numbers of these formerly endangered animals?

Collect as many versions as possible of children’s books featuring versions of the Big Bad Wolf. Do any of these books include factual information about wolves? Are any of the versions sympathetic toward wolves?

Develop a class checklist listing the necessary conditions for allowing an animal to be hunted.

*Discussion Questions*

In our country’s westward expansion, we cleared forests, decimated habitats for many animals, and killed many animals upon which wolves fed. When wolves began killing domestic animals, we paid money to have wolves slaughtered. Eventually wolves were in danger of becoming extinct, and we realized how important they are and began protect-

ing them. Now the wolf population is large enough to have many folks demanding that the numbers be culled. Should we hunt wolves again? If we do hunt wolves, what lessons should we have learned from our history?

In many states the deer population is too large for the available resources. Deer-hunting season is not removing enough of the population to balance the environment. Should wolves and other predators be introduced into these areas? What happens if the area includes lots of residential areas or places that have lots of domesticated animals?

When a predator group, like wolves, is pushed to the brink of extinction, it makes sense that the population of deer would explode. Since Michigan is pushing for a wolf hunt in the Upper Peninsula, what could we expect to see in the Upper Peninsula deer population?

Many people regularly complain that they are misunderstood. What is something about you that other people just do not understand? Or, if this is not a concern, how do you go about making sure that people do understand you?

How would you react if a wolf killed your pet dog or cat? Compare your reaction and your feelings to the picture in the book on page eleven and the practice of “denning.” Do humans and their pets deserve special treatment or protection from wolves?

*Applying and Extending Our Knowledge*

On page 5, the author states, “Hatred of wolves goes far back in history. As soon as people began raising livestock, wolves became the enemy and the symbol of savagery.” Later, on page 8, we learn that the Massachusetts Bay Company paid an average month’s salary for each dead wolf a person presented.

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Begin the exploration of this book by having each class member write down all the facts versus all the myths they know about wolves. Add songs or other popular culture or folklore wolf references. Consolidate the information and keep it for reference as students proceed through the book. Be sure to cite the page numbers that confirm the information or move the fact to the myth and folklore section when a “fact” is proven false, including the page numbers here as well).

In addition to confirming or rejecting facts students have listed, make sure to add important facts that were neglected upon creation of the list.

Read a selection from *The Three Pigs* involving the wolf, or watch a video clip from the *Wolf Man*. Create a Venn diagram showing the differences between real wolves and fiction or Hollywood, as well as the similarities. Discuss the kernel of truth the author or director uses to exaggerate the fear factor. Why are people frightened by these close relatives of dogs?

Research the diet of a wolf. Figure out how much food the average wolf eats per year in pounds. How many deer would one wolf eat each year? How many cows? How many chickens or other domesticated animals? Read Farley Mowat’s *Never Cry Wolf* (and/or watch the movie). What does Mowat observe about wolf diet and wolf behavior? Does it match the portrayal of wolves you have imagined?

Design an ad campaign to accentuate the benefits of the wolf to your state (see the Historical Range versus Current Range of the Gray Wolf graphic on page 45). If possible, make a sixty-second promotional video that can be shared electronically and shown at your school.

Have one group of students do a satirical video expose (see Jon Scieszka’s *True Story of the Three Little Pigs* for inspiration) outlining the slander and libel

in fiction and media directed toward the wolf. Have another group present the Ranger’s rebuttal (or the point of view of another group in favor of hunting wolves).

*Common Core Connections*

CCSS.ELA-Literacy.RI.6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

CCSS.ELA-Literacy.RI.6.7 Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.

CCSS.ELA-Literacy.RL.6.9 Compare and contrast texts in different forms or genres (e.g., stories and poems; historical novels and fantasy stories) in terms of their approaches to similar themes and topics.

CCSS.ELA-Literacy.W.6.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

CCSS.ELA-Literacy.W.6.7 Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate. CCSS.ELA-Literacy.W.6.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

CCSS.ELA-Literacy.W.6.9a Apply grade 6 Reading standards to literature (e.g., “Compare and contrast texts in different forms or genres [e.g., stories and poems; historical novels and fantasy stories] in terms of their approaches to similar themes and topics”).

CCSS.ELA-Literacy.RST.6-8.1 Cite specific textual evidence to support analysis of science and technical texts.

CCSS.ELA-Literacy.RST.6-8.7 Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).

CCSS.ELA-Literacy.WHST.6-8.1a Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically.

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We read on page 13, “In the early 1930s a great irony occurred in the history of American wildlife. About the same time that the last wolves were being exterminated, scientists began to rethink the role of predators.”

Make a list of all the predators in your neighborhood (don't forget insects, reptiles, and other less obvious predators). For each predator, explore the value this predator adds to your region.

In the book, Murie concludes that wolves and sheep were in a delicate balance. Can this balance explain why some states (Michigan) are now hunting wolves after many years of trying to increase the population? Or are political organizations, like states, too willing to feed the lingering bad feelings many voters have against animals like wolves? Debate this.

Gather information from the Michigan Department of Natural Resources, the governor's office, and the organization Keep Michigan Wolves Protected. How is the information pertinent to the political process that allowed Michigan residents the ability to purchase a license to hunt wolves? Research the results of the first wolf hunt in Michigan as if you were a reporter. Make sure to include the backstory and quotes from all important and interested parties.

Update the wolf situation in Yellowstone National Park. Find recent articles about the wolves in Yellowstone and write a report summarizing the findings. Part of the rationale for bringing wolves into Yellowstone is related to the fact that the elk population was out of control. Find information about the current size of the elk population. Include this information in your summary. Write a recommendation for continuing the current wolf management program or amending it. If possible, get information from Renée Askins or a biologist working with wolves in Yellowstone.

The elk population in Yellowstone mentioned above

was listed at more than 30,000 animals. It is clear that the author believes this number is too many. The map on page 45 shows that wolves were a common feature in every state except Hawaii.

Research the process for deciding how many elk in Yellowstone or other animals in your area is the right number of animals for that area.

Looking at the Yellowstone elk herd, how many wolves would be necessary to keep the balance between wolves and elk? How much does one wolf eat? How much does one elk weigh? How often does a wolf need to eat? Wolves tend to eat either the very young or the very old. Make sure to include these questions (and others) in your analysis.

### *Common Core Connections*

CCSS.ELA-Literacy.W.6.7 Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.

CCSS.ELA-Literacy.W.6.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

CCSS.ELA-Literacy.RST.6-8.1 Cite specific textual evidence to support analysis of science and technical texts.

CCSS.ELA-Literacy.WHST.6-8.1a Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically.

CCSS.ELA-Literacy.RI.6.7 Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.

CCSS.ELA-Literacy.SL.6.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.

CCSS.ELA-Literacy.W.6.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

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Watch this YouTube video about the effect of wolves on the Yellowstone ecosystem: [www.filmsforaction.org/watch/how-wolves-change-rivers/#.Uwkv-FA8p-M.facebook](http://www.filmsforaction.org/watch/how-wolves-change-rivers/#.Uwkv-FA8p-M.facebook)

Assume that you are working for a company like snopes.com. What is the truth of the claims in this video about the effect of wolves on Yellowstone? Who or what organization is behind the making of this video? Does the organization have a vested interest in making a claim about the benefit of wolves?

*Once a Wolf* does an excellent job of presenting the history of wolves in this country and showing the historical shift in attitude toward wolves. This book was first published in 1999 and, consequently, was based on information before that publication date. Review this book based on more current information about wolves. How have our attitudes about wolves changed or not changed? Suggest changes for revision to the author and publisher.

### Common Core Connection

CCSS.ELA-Literacy.RI.6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

CCSS.ELA-Literacy.W.6.1 Write arguments to support claims with clear reasons and relevant evidence.

CCSS.ELA-Literacy.W.6.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

CCSS.ELA-Literacy.RST.6-8.8 Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.

### Further Reading

Patent, Dorothy Hinshaw. *When the Wolves Returned: Restoring Nature's Balance in Yellowstone*. Walker, 2008.

Wimmer, Teresa. *Wolves*. Creative Education, 2010.

### Other Websites to Explore

Gray Wolf  
[www.nwf.org/Wildlife/Wildlife-Library/Mammals/Gray-Wolf.aspx](http://www.nwf.org/Wildlife/Wildlife-Library/Mammals/Gray-Wolf.aspx)  
Information on the gray wolf from the National Wildlife Federation.

Gray Wolf: Basic Facts  
[www.defenders.org/gray-wolf/basic-facts](http://www.defenders.org/gray-wolf/basic-facts)  
Information on the grey wolf including population numbers and range locations.

Jerome Meyer's *Denver Post* article: *How Wolves Change Rivers* Video  
[www.denverpost.com/opinion/ci\\_25200697/how-wolves-change-parks](http://www.denverpost.com/opinion/ci_25200697/how-wolves-change-parks)  
Opinion-page article by Jerome Meyer in the *Denver Post* on a four-minute video titled *How Wolves Change Rivers* appearing on YouTube.

Guide created by: Ed Spicer, curriculum consultant, and Lynn Rutan, retired middle-school librarian, now reviewer and blogger at *Bookends: the Booklist Youth Blog*.

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