

INVASIVE SPECIES

Annotated Bibliography of K-12 Educational Resources Wisconsin Center for Environmental Education (3/10)

The following list consists of selected resources on the general topic of Invasive Species. All materials are available for loan at the WCEE Resources Library. Many more resources are available on this and other topics, and there are many resources for specific species, such as cane toads, plants, etc. Materials are also available for purchase from a variety of book stores and websites. Please call or visit the WCEE for assistance or visit our web site at www.uwsp.edu/wcee/library for additional information on borrowing resources.

Teaching Activity Guides

Exotic Species Compendium of Activities to Protect the Ecosystem (ESCAPE) by Illinois/Indiana Sea Grant, Urbana, IL. (2001).

This compendium, developed by classroom and informal educators, contains activities and materials designed to educate students about invasive species. It includes lesson plans, activity sheets for students, a video and CD ROM, posters and games, and sample zebra mussel shells.

Grade levels: K-12 Length: 36+ activities

Available for purchase from: <http://www.seagrant.umn.edu/publications/X79> (\$63.00)

Borrowing: Check your local library or the WCEE (call number: AC BC AQ 55)

Invaders of the Forest: Educators Guide to Invasive Plants of Wisconsin's Forest by Beth Mittermaier, Earth Ltd., Wisconsin Department of Natural Resources, Madison, WI (2005)

Included in this guide are activities to enhance learning about invasive plants in Wisconsin. It is geared toward Wisconsin forests, but can be adapted for other locations.

Grade levels: K-12 Length: 139 pages

Available for free download from:

<http://www.dnr.state.wi.us/org/caer/ce/eek/teacher/invasiveplantguide.htm>

Borrowing: Check your local library or the WCEE (call number: AC PL 22)

UFO's: Unwanted Flowering Objects prepared by Emily Steinwehe and Kathy Waldera. (2008).

This activity guide introduces students to native and non-native species. They build student skills of plant ID, mapping, and proper removal/management of non-native species.

Grade levels: 5-9 Length: 94 pages

Borrowing: Check your local library or the WCEE (call number: AC IS 001)

See Cella Chow! A Purple Loosestrife Biological Control Manual for Educators by Brock Wood and Derek Strohl, Wisconsin Department of Natural Resources, Wisconsin Wetlands Association. (2003).

This is a very diverse array of hands-on activities and well written curriculum guide. Each standards-based lesson plan is designed for each grade.

Grade levels: 6-12 Length: 15 activities, 111 pages

Available for free download from:

http://www.dnr.state.wi.us/org/es/science/publications/ss981_2003.htm

Borrowing: Check your local library or the WCEE (call number: AC ECO 57)

Invasion Ecology by Marianne E. Krasny, NSTA Press, Arlington, VA. (2003).

Designed to show students how abstract concepts apply to real-life problems, Invasion Ecology focuses on invasive species and their impact on ecological balance. Teacher's edition explains how to guide, inquire, and conduct interactive research and includes sample assessment tasks and rubrics.

Grade levels: 9-12 Length: 176 pages

Available for purchase from: Amazon.com or AcornNaturalists.com (\$16.95), (\$7.95 student ed.)

Borrowing: Check your local library or the WCEE (call number: TXT ECO 13 + suppl.)

Videos/DVDs

Cane Toads: An Unnatural History by Mark Lewis, First Run Features/New York. (2001).

Humorous documentary about cane toads, an invasive species in Australia. The toads were imported from Hawaii in the 1930's to help get rid of the cane beetle. The plan failed, and the cane toad population soared. Despite the trouble they cause, the animal has a cult following in Australia.

Grade levels: 5-12 Length: 65 minutes

Borrowing: Check your local library or the WCEE (call number: AV DVD WL A 1)

Non-Native Invasion by Louisiana Public Broadcasting, Baton Rouge, LA. (2000).

This VHS tape investigates some of the impacts and controls of invasive plant and animal species. Also associated with this tape is an activity/curriculum guide. (AC EG 205).

Grade levels: 5-9 Length: 19.5 minutes

Borrowing: Check your local library or the WCEE (call number: AV ECO 1)

Emerald Ash Borer: The Green Menace (2006).

This informative video covers a dangerous invasive species that is currently threatening the Eastern 2/3 of the U.S. It focuses on the state of Michigan, where the emerald ash borer has already wrecked havoc on the ash population. It also shows the efforts underway to stop the spread of such a dangerous insect. A helpful tool in conjunction with this video is the Emerald Ash Borer Identification Kit (DEM ECO 1).

Grade levels: 9-University Length: 35 minutes

Borrowing: Check your local library or the WCEE (call number: AV DVD FOR 5)

Books for Youth

Aliens from Earth: When Animals and Plants Invade Other Ecosystems by Mary

Batten/Illustrated by Beverly J. Doyle, Peachtree, Atlanta, GA. (2003).

Spanning through time and the world, this book offers an in-depth look at various invasive species. Labeled pictures help put truth to the dangers of "aliens", including the extinction of native plant and animal species. This book also offers suggestions and tips to help control "alien invasions."

Grade levels: 4-9 Length: 29 pages

Available for purchase from: Amazon.com (\$7.45)

Borrowing: Check your local library or the WCEE (call number: BY ECO 30)

Reference/Background Books

Aquatic Invasive Species by Mandy Beall, Department of Natural Resources/Madison, WI. (2005).

This handbook guides the reader through a brief national perspective on aquatic invasives and highlights some Wisconsin state-wide programs as well. It contains helpful information on designing

educational programs related to aquatic invasive species. Also includes case studies, resources, information on specific species, and steps to prevent the spread of aquatic invasive species.

Grade levels: 9-University Length: 119 pages

Borrowing: Check your local library or the WCEE (call number: BA IS 1)

Demonstration Materials/Field Guides

BioQuest Invasive Species of the Great Lakes by Biological and Education Kits Production, Fort Atkinson, WI.

This kit contains several specimens of preserved invasive species found in and around the Great Lakes region. There is a teachers' guide included.

Grade levels: 4-University

Borrowing: Check your local library or the WCEE (call number: DEM IS 1)

Emerald Ash Borer Identification Kit by Michigan State University, East Lansing, MI. (2003).

This kit contains the following items: 1 piece of ash wood with bark attached showing Emerald Ash Borer (EAB); 1 piece of ash bark showing typical EAB galleries; 1 EAB adult in glass vial; and 3 bulletins containing EAB information.

Grade levels: 9-University

Borrowing: Check your local library or the WCEE (call number: DEM ECO 1)

Invasive Plants: Guide to Identification and the Impacts and Control of Common North American Species by Sylvan Ramsey Kaufman and Wallace Kaufman

This field guide contains a vast amount of information about, and colorful photographs of, common invasive plant species of North America. Each section includes characteristics of the species, how it came here, its effect on the ecosystem, and suggestions for managing it.

Grade levels: 9-University Length: 458 pages

Available for purchase from: Amazon.com (\$26.37)

Borrowing: Check your local library or the WCEE (call number: FG PL 30)

Websites

US Dept of Agriculture (2009).

Designed for educators this site offers several beneficial links. "K-12 Resources" provides general educational resources for students K-12 for invasive species. "Outreach Tools" provides links for resources created to assist in increasing awareness of invasive species issues. "What You Can Do" offers ways to learn about general volunteer opportunities and ways the average citizen can help to control invasive species.

Grade levels: K-12, adult/university

Web link: <http://www.invasivespeciesinfo.gov/resources/educk12.shtml>

Invasives by the Wisconsin Department of Natural Resources (2010).

WIDNR offers useful background information on the invasive plants and animals of Wisconsin. The site also features a variety of short videos directed towards students in 5-12 grade levels, a photo gallery, a "Take Action" link, and information on the laws and policies related to Wisconsin invasive species.

Grade levels: 5-12, adult/university

Web link: <http://dnr.wi.gov/invasives/>

Invasive Plant Species Education Kit by UW Stout (2009).

Educators can access free downloadable lessons and curriculum from this website as well as information on how to order a complete Invasive Plant Species Education Kit to use in their educational settings.

Grade levels: 9-12, adult/university

Web link: http://www.uwstout.edu/faculty/jamesk/Invasive_Plant/Invasive_Plant.htm

Invasive Species by The Nature Conservancy (2009).

This site is great for general background knowledge on invasive species in the United States. Also provides links to current research endeavors and a “What You Can Do” section.

Grade levels: 9-12, adult/university

Web link: <http://www.nature.org/initiatives/invasivespecies/>

Invasive Species Videos by the National Park Service (2011).

As part of the Great Lakes Restoration, the National Parks Service created four short 5 minute videos discussing the impact of invasive species on people and communities as well as what the general public can do to prevent their spread. Although set in the national parks they are useful to anyone in an educational setting.

Grade levels: 9-12, adult/university

Web link: <http://illinoisam.blogspot.com/2011/10/new-invasive-species-videos-from.html>

Stop Aquatic Hitchhikers (2009).

“Protect Our Waters” gives individual species profiles, background information on invasive species, suggestions and tips for how individuals can help “stop aquatic hitchhikers.” Invasive species are detailed on a national scale.

Grade levels: 9-12, adult/university

Web link: <http://www.protectyourwaters.net/>

Aquatic Invasive Species by the University of Wisconsin Sea Grant (2004).

Wisconsin Sea Grant is a leader in research and outreach related invasive species. Current efforts focus on educating the public about zebra mussels and other invasive species, developing ways to control their spread, reducing their adverse effects, and combining conceptual and analytical tools required to evaluate fishery restoration efforts. Site gives workshop and background information, fact sheets, and terminology lists.

Grade levels: adult/university

Web link: <http://www.seagrant.wisc.edu/ais/>