

## Appendix II - References and Resources

American caviar – Paddlefish caviar. 1-800-caviar.com.

<https://www.1-800-caviar.com/nsearch.html?catalog=1-800-caviar&query=Paddlefish&x=0&y=0>. Accessed December 7, 2020.

Commercial site that sells Paddlefish roe, includes pricing and description of the taste.

American Fisheries Society. Tennessee Wildlife Resources Agency. *Status of Paddlefish in the United States*.

[https://usgs-cru-individual-data.s3.amazonaws.com/pbettoli/intellcont/Status%20of%20Paddlefish\\_May%202009%20Proofs-1.pdf](https://usgs-cru-individual-data.s3.amazonaws.com/pbettoli/intellcont/Status%20of%20Paddlefish_May%202009%20Proofs-1.pdf). Accessed December 11, 2020.

2009 study detailing status of Paddlefish in the US.

"An American Journey". Jackson Times.

<http://www.pasorobles-usa.com/paddlefish.htm>. Accessed December 11, 2020.

Article describes the journey of a tagged Paddlefish that crossed dams. Outdated but still a good article to read.

Appelhof, Mary. 2017. *Worms Eat My Garbage* (35 anniversary ed.). Storey Publishing, LLC.

Helpful book on how to set up and maintain a worm composting system. Can be found on Amazon.

Aswan High Dam. Kaylene Murray. Teacherlink.ed.usa.edu.

<http://teacherlink.ed.usa.edu/tlresources/units/byrnes-africa/KAYMUR/INDEX.HTM>.

Accessed December 11, 2020.

Lesson plan with additional background information. Old but still useable.

Bailey, P. et al. Center for Fisheries, Aquaculture and Aquatic Sciences. North Dakota Game and Fish Department. *Relationships between water and Paddlefish *Polyodon spathula* dentary elemental and stable isotopic signatures: potential application for reconstructing environmental history*.

<https://www.osti.gov/pages/servlets/purl/1408604>. Accessed on December 11, 2020.

Study detailing how water quality relates to Paddlefish growth, how Paddlefish are aged, etc.

Barrett-O'Leary, M. 2002. *OH NO! Hannah's Swamp is Changing*. Louisiana Sea Grant College Program.

<http://takeaim.org/wp-content/uploads/2018/07/Oh-No-Hannahs-Swamp-is-Changing.pdf>

Accessed December 11, 2020.

Hannah the heron experiences changes in the swamp she lives in when a non-native plant begins growing and spreading. PDF available for download at link provided.

*Booker Fowler Fish Hatchery and the Story of Finnie the Fingerling*. Louisiana Department of Wildlife and Fisheries. Booker Fowler Fish Hatchery. Acquired from LDWF staff.  
A coloring/storybook depicting the hatchery's role in the development of specific species of fish, including the Paddlefish.

Caddo Lake Institute. *The Paddlefish Project*.  
<https://caddolakeinstitute.org/Paddlefish/>. Accessed December 11, 2020.  
Really good info on Paddlefish recovery efforts in Caddo Lake.

Cebra-Thomas, Judy. *Overview of Chick Development*. Swarthmore College.  
[http://www.swarthmore.edu/NatSci/sgilber1/DB\\_lab/Chick/Chick\\_dev.html](http://www.swarthmore.edu/NatSci/sgilber1/DB_lab/Chick/Chick_dev.html).  
Accessed December 14, 2020.  
College-level description of chick embryology, reference for teachers. Old but still up and has some good info.

Collins Academy. *Paddlefish Project*.  
<http://www.collinsacademy.com/programs/Paddlefish-project/>. Accessed December 11, 2020.  
Site detailing some recent Paddlefish restoration efforts in Texas in the Caddo area.  
Resources for teachers and students.

Commonwealth of Pennsylvania, Fish and Boat Commission. *Paddlefish Restoration Program*.  
<https://pittsburghPaddlefish.org/wp-content/uploads/2014/01/Paddlefish-Restoration-Program-in-Western-PA.pdf>. Accessed December 7, 2020.  
2011-2013 report on Paddlefish restoration efforts in Pennsylvania.

Corsentino, Pattyanne. 1995. *Ecosystem Matters: Activity and Resource Guide for Environmental Educators*. U.S. Department of Agriculture.  
[https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb5073104.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5073104.pdf).  
Accessed December 7, 2020

Eymard, Tami and Brian T. Hardcastle. *A Practical Handbook on Otolith Removal for LDWF Age and Growth Studies*. Lyle S. St. Amant Marine Laboratory: Grand Terre Island, LA. Pp 1-9.

EEK! Environmental Education for Kids.  
<https://www.eekwi.org/>. Accessed December 11, 2020.  
Good website with info on invasives and other environmental topics.

Environmental Protection Agency, United States. *How to Create and Maintain an Indoor Worm Composting Bin*.  
<https://www.epa.gov/recycle/how-create-and-maintain-indoor-worm-composting-bin>  
Accessed December 14, 2020.  
Good walkthrough of setting up an indoor worm bin.

Environmental Protection Agency, United States. *Mosquito Life Cycle*.  
<https://www.epa.gov/mosquitocontrol/mosquito-life-cycle>. Accessed December 14, 2020.  
Overview of mosquito life cycle with images.

Fang, Janet. *A World Without Mosquitos*. 2010. Macmillan Publishers Limited.  
<https://www.nature.com/news/2010/100721/pdf/466432a.pdf>. Accessed December 14, 2020.  
PDF download of story written about mosquito ecology/biology and speculates on the potential effects of eradicating species of mosquito that harm humans.

Favre, David. Animal Law Web Center. Michigan State University. *American Wildlife Law - An Introduction*.  
<https://www.animallaw.info/article/american-wildlife-law-introduction>.  
Accessed December 11, 2020.  
Good site for getting an overview of how wildlife law works in the US.

Fish Doc. *Fish Health and pH- Acidity and Alkalinity Explained*.  
<https://fishdoc.co.uk/fish-health-and-ph/>. Accessed December 7, 2020.  
Information on how pH levels can affect fish health and suggestions on how to change pH levels.

Fisheries and Oceans Canada. *Otoliths, removal and ageing*.  
<https://www.dfo-mpo.gc.ca/science/aah-saa/otoliths/students/removal-prelevement-eng.html>  
Accessed December 11, 2020.  
Information on otoliths, otolith removal, and how they are used to age fish.

Gallon, Paula. *March 2002 and Frog Spawn Watch*. eRodent.  
<http://www.erodent.co.uk/GardenPond/March2002.htm>. Accessed December 14, 2020.  
This site has excellent pictures and may be used for one of the study stations. Site is still up and photos are still great.

*Healthy Water, Healthy People: Testing Kit Manual.*

<https://www.watereducation.org/product/healthy-water-healthy-people-test-kit-manual>

Accessed December 14, 2020.

Watercourse workshop distributes materials through training workshops and institutes as well as directly to the public.

*Healthy Water, Healthy People: Water Quality Educators Guide.*

<https://www.watereducation.org/product/healthy-water-healthy-people-water-quality-educators-guide>. Accessed December 14, 2020.

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Hill, M.A. *Embryology Frog Development*. UNSW Embryology.

[https://embryology.med.unsw.edu.au/embryology/index.php/Frog\\_Development](https://embryology.med.unsw.edu.au/embryology/index.php/Frog_Development)

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Tons of great info and pics of frog embryo development.

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<http://solanomg.ucanr.edu/files/245170.pdf>. Accessed December 14, 2020.

PDF files with classroom activities on how to make a worm bin and bedding types.

Iowa Department of Natural Resources. *Fishes of Iowa*.

<https://www.iowadnr.gov/Fishing/Iowa-Fish-Species/Fish-Details/SpeciesCode/PAH>

Accessed December 7, 2020.

Includes Paddlefish biology and describes legal catch of Paddlefish in Iowa.

IUCN Red List. International Union for Conservation of Nature.

<https://www.iucnredlist.org/>. Accessed December 11, 2020.

Most popular/respected list of current threatened and endangered species in the world.

Full of additional resources and information. Includes species search feature detailing the conservation status of the species searched for.

Jackson, Donald C. and Gerd Marmulla. *The Influence Of Dams On River Fisheries*.

<http://www.fao.org/DOCREP/004/Y2785E/y2785e02a.htm>. Accessed December 11, 2020.

Old but contains some good info, seems to focus on dams around the world.

Johnston County Soil and Water. *UNDERSTANDING INVASIVE AQUATIC WEEDS*.

<https://www.johnstonnc.com/swc/content.cfm?pageid=uiaw>. Accessed December 11, 2020.

Tons of great info on aquatic weed management. Home and classroom activities provided, aimed at 5th graders but still a good resource.

Jones, David. *The Frog and Pond Diary – March 2002*. My Bit of the Planet.

<http://www.mybitoftheplanet.com/2002/frogmarch.html#latest>. Accessed December 14, 2020.

Detailed photographs of tadpoles. Site is still up, pictures are still great.

Joyce, Chris. Assessment Resource Banks. *Venn Diagrams*. 2008.

<https://arbs.nzcer.org.nz/venn-diagrams>. Accessed December 14, 2020.

Describes venn diagrams and how to use them.

LibreTexts-Chemistry. *pH Indicators*.

<https://chem.libretexts.org/Bookshelves/>

[Physical and Theoretical Chemistry Textbook Maps/Supplemental Modules](#)

[\(Physical and Theoretical Chemistry\)/Acids and Bases/Acid and Base Indicators/](#)

[PH Indicators](#). Accessed December 7, 2020.

Full-color pH scale.

Louisiana Department of Wildlife and Fisheries.

<https://www.wlf.louisiana.gov/>. Accessed December 11, 2020.

Source of many things including information on otoliths, fish sampling, restoration, conservation, etc.

Louisiana Department of Wildlife and Fisheries. *Fishing Regulations 2020*.

<https://www.wlf.louisiana.gov/page/recreational-freshwater-finfish-and-crawfish>

Accessed December 7, 2020.

Status of Paddlefish fishing regulations in Louisiana.

Louisiana Department of Wildlife and Fisheries. *Invasive Species Brochures*.

<https://www.wlf.louisiana.gov/resources/category/invasive-species>

Accessed December 11, 2020.

Focuses on invasive species that threaten habitats and ecosystems. More info and PDF's available on LDWF's website.

Louisiana Department of Wildlife and Fisheries. *Rare, Threatened, and Endangered Ranks and Statuses*.

<https://www.wlf.louisiana.gov/page/rare-threatened-and-endangered-ranks-and-statuses>  
Accessed December 11, 2020

Great list detailing the different conservation statuses in the state of Louisiana (and some federal level rankings) and what definitions/legal authority they have.

Louisiana Sea Grant College Program: Baton Rouge, LA. *Invasive Species Resources*.

<http://www.laseagrant.org/education/topics/invasive-species/resources/>

Accessed December 11, 2020

Lots of great teacher resources on invasive species (activities, lessons, etc.).

Minnesota Department of Natural Resources. Rare Species Guide - *Polyodon spathula*

<https://www.dnr.state.mn.us/rsg/profile.html?action=elementDetail&selectedElement=AFCAB01010>

Accessed Dec 7, 2020.

Discusses Paddlefish conservation efforts in Minnesota.

Minnesota Pollution Control Agency. *All About Paddlefish*.

<https://www.pca.state.mn.us/quick-links/Paddlefish>. Accessed December 7, 2020.

Paddlefish biology and distribution in Minnesota.

Missouri Department of Conservation. *Paddlefish*.

<https://huntfish.mdc.mo.gov/fishing/species/paddlefish>. Accessed December 7, 2020.

Main page with links to a lot of info on Missouri Paddlefish regulations and fishing.

Montana Department of Fish, Wildlife and Parks. *Paddlefish of the Yellowstone and Missouri Rivers*.

[http://fwp.mt.gov/fish/species/brochure\\_Paddlefish.html](http://fwp.mt.gov/fish/species/brochure_Paddlefish.html). Accessed December 11, 2020.

Background info on Paddlefish history in the Yellowstone area.

Montana Natural Heritage Program and Montana Fish, Wildlife and Parks.

Montana Field Guide. *Paddlefish (Polyodon spathula)*.

<http://FieldGuide.mt.gov/speciesDetail.aspx?elcode=AFCAB01010>. December 7, 2020,

Paddlefish status and history in Montana

Mormino, Kathy. *The Chicken Chick - Chicken Embryo Development*.

<https://the-chicken-chick.com/chicken-embryo-development-graphic/>

Accessed December 14, 2020.

Great detailed photos of chicken embryo development. Website gives warning for "graphic photos" but this is simply a warning that an actual chicken embryo will be shown, there is nothing "graphic" on the page.

National Aquatic Nuisance Species (ANS) Task Force. *Aquatic Nuisance Species*.

<https://anstaskforce.gov/default.php>. Accessed December 11, 2020.

This site has profiles of selected aquatic nuisance species.

National Invasive Species Council. [www.doi.gov](http://www.doi.gov).

<https://www.doi.gov/invasivespecies/>. Accessed December 11, 2020.

Tons of info on invasives, species profiles, management methods, etc.

NatureServe. *NatureServe Explorer - Polyodon spathula*.

[https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.105060/Polyodon\\_spathula](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.105060/Polyodon_spathula)

Accessed December 14, 2020.

Good map showing the conservation status of Paddlefish populations by state.

"*Nonindigenous Species Activities for Youth*". Mississippi State University Extension Service publication #2286. 78pp.

<http://extension.msstate.edu/publications/publications/nonindigenous-species-activities-for-youth>. Accessed December 11, 2020.

Activities geared to help students understand what exotics are and the impact they have on an area. Profiles of selected species are also provided.

North Dakota Game and Fish. *Paddlefish - Questions and Answers*.

<https://gf.nd.gov/fishing/Paddlefish-snagging/faq>. Accessed December 11, 2020.

General information on Paddlefish, includes photos and details of Paddlefish dentary bone aging.

Oklahoma Department of Wildlife Conservation.

<https://www.wildlifedepartment.com/fishing/species/Paddlefish>

Accessed December 7, 2020.

Discusses Paddlefish status in Oklahoma.

Oregon State University. Oregon Sea Grant. *Watershed and Invasive Species Education (WISE)*.  
<https://seagrant.oregonstate.edu/education/watershed-and-invasive-species-education-wise>  
Accessed December 11, 2020.  
More resources for aquatic education, specifically wetlands and invasive species.

Project Learning Tree, *RESOURCES FOR PREK-8 ACTIVITY 76 – TREE COOKIES*.  
<https://www.plt.org/blog/activity/activity-76-tree-cookies/>. Accessed December 8, 2020.  
Resources for teaching about tree cookies and related topics.

Rader's Chem4Kids. *Acids and Bases Are Everywhere*.  
[http://www.chem4kids.com/files/react\\_acidbase.html](http://www.chem4kids.com/files/react_acidbase.html). Accessed December 7, 2020.  
Site is designed for students. Explains pH scale and includes basic chemistry definitions.

Reed, Bobby. "Life History and Management of Paddlefish (*Polyodon spathula*) in Louisiana."  
LDWF. For a copy, contact program manager.

Reed, Bobby C., et al. 1992. "Growth, Fecundity, and Mortality of Paddlefish in Louisiana."  
*Transactions of the American Fisheries Society*. 121:378-384.  
A comprehensive study of Paddlefish in Louisiana.

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<https://toledobendlakecountry.com/history-toledo-bend>. Accessed December 11, 2020.  
History of the Toledo Bend Dam and Reservoir.

Sabine River Authority of Texas. *Toledo Bend*.  
<https://www.sratx.org/water-supply/toledo-bend/>. Accessed December 11, 2020.  
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Science Buddies. *Acids, Bases, & the pH Scale*.  
<https://www.sciencebuddies.org/science-fair-projects/references/acids-bases-the-ph-scale>  
Accessed December 7, 2020.  
Full pH scale and examples of solutions at each pH level

Sim Science. Cornell Laboratory of Atomic and Solid State Physics. *Cracking Dams*.  
<http://www.lassp.cornell.edu/sethna/SimScience/cracks/index.html>.  
Accessed December 11, 2020.  
Introduction to civil engineering and the construction of dams.



Sutherland, Donald J. and Wayne J. Crans. *Mosquitoes in Your Life*. New Jersey Agriculture Experiment Station publication # SA220-5M-86.  
<http://vectorbio.rutgers.edu/outreach/moslife.php>. Accessed December 14, 2020.  
Life stage of three different species of mosquitoes – Anopheles, Aedes and Culex.

Tennessee Aquarium and the IMAX 3-D Theater. *Amazing Animals-Fish: Paddlefish*.  
<https://tnaqua.org/animal/Paddlefish/>. Accessed December 7, 2020.  
Pictures and reasons that Paddlefish are threatened, and brief descriptions of Paddlefish biology and ecology.

Texas Parks and Wildlife. *Aquatic Species: Paddlefish - Spoonbill*.  
<https://tpwd.texas.gov/huntwild/wild/species/pad/>. Accessed December 7, 2020.  
Biology of Paddlefish, life cycle, habitat, and threats to Paddlefish in Texas.

*Understanding Invasive Aquatic Weeds*. Aquatic Plant Management Society, Inc. Vicksburg, Miss. 2002. 15pp.  
[http://www.aquarius-systems.com/Entries/View/185/understanding\\_invasive\\_aquatic\\_weeds.aspx](http://www.aquarius-systems.com/Entries/View/185/understanding_invasive_aquatic_weeds.aspx). Accessed December 11, 2020.  
Activity book to increase awareness of the importance of native plant in lakes, rivers and wetlands, and the destructive potential of invasive weeds to these areas. PDF available at link provided.

University Corporation for Atmospheric Research. *Tree Rings Simulation - Dendrochronology*  
<https://scied.ucar.edu/interactive/tree-ring>. Accessed December 8, 2020.  
Cool interactive simulation that let's you virtually "grow" tree rings and adjust different environmental factors to see how those factors impact tree ring growth.

University of Colorado. *PhET: pH scale basics*  
[https://phet.colorado.edu/sims/html/ph-scale-basics/latest/ph-scale-basics\\_en.html](https://phet.colorado.edu/sims/html/ph-scale-basics/latest/ph-scale-basics_en.html)  
Accessed December 7, 2020  
Very cool interactive simulation allowing students to mix water and other liquids to see effects on pH

University of Michigan Museum of Zoology. Animal Diversity Web. *Polyodon spathula*.  
[https://animaldiversity.org/accounts/Polyodon\\_spathula/](https://animaldiversity.org/accounts/Polyodon_spathula/). Accessed December 11, 2020.  
Lots of great info on Paddlefish (biology, ecology, range, development, etc.)

Upper Midwest Environmental Sciences Center. *Paddlefish Study Project*.  
<http://www.umesc.usgs.gov/aquatic/fish/Paddlefish/main.html>. Accessed June 14, 2004.  
Information for restoring depleted Paddlefish populations. Also has a Paddlefish video that can be downloaded for viewing.

Urban Programs Resource Network. *The Adventures of Herman*.  
<https://web.extension.illinois.edu/worms/>. Accessed December 14, 2020.  
Site designed to introduce students to worms.

Urban Worm Company. *Vermicomposting 101: 9 Awesome Choices for Worm Bedding*.  
<https://urbanwormcompany.com/what-to-use-for-worm-bedding/>  
Accessed December 14, 2020.  
Good info on which bedding to use for worm bins.

U.S. Fish and Wildlife Service. *Fish and Aquatic Conservation - American Paddlefish*.  
<https://www.fws.gov/fisheries/freshwater-fish-of-america/Paddlefish.html>  
Accessed December 7, 2020.  
Includes Paddlefish biology, ecology, history and conservation

U.S. Fish and Wildlife Service. *Paddlefish Production*.  
<https://www.fws.gov/southeast/private-john-allen/Paddlefish-production/>  
Accessed December 7, 2020.  
Great info on the artificial spawning process of Paddlefish.

U.S. Geological Survey. *Polyodon spathula (Paddlefish)*.  
<https://nas.er.usgs.gov/queries/factsheet.aspx?SpeciesID=876>  
Accessed December 11, 2020.  
Species overview, includes species current range map.

U.S. Geological Survey. *Water Science School/pH and Water*  
[https://www.usgs.gov/special-topic/water-science-school/science/ph-and-water?qt-science\\_center\\_objects=0#](https://www.usgs.gov/special-topic/water-science-school/science/ph-and-water?qt-science_center_objects=0#). Accessed December 7, 2020.  
Background information about pH.

Walz, Gari. *Bio-quest Frog Development Study Kit Teacher's Guide*. 1996. Nasco  
<https://www.fishersci.com/shop/products/frog-development-study-kit-frog-development-study-set/s11011>. Accessed December 14, 2020.

Can still be obtained from Fisher Scientific for \$110 at the link above. The teacher's guide and a student's guide come with the plastic mounted Frog Development Study Kit. It is an excellent teacher reference. Available for purchase from other sites as well.

Williamson, D.F. 2003. *Caviar and Conservation: Status, Management and Trade of North American Sturgeon and Paddlefish*. TRAFFIC North America: Washington D.C.  
Electronic edition available at <https://www.traffic.org/publications/caviar-and-conservation-status-management-and-trade-of-north.html>. Accessed December 11, 2020

Wisconsin Department of Natural Resources. *K-12 Activities and Lesson Plans*.  
<https://dnr.wisconsin.gov/topic/Invasives/education.html>. Accessed December 11, 2020.  
Links to other invasive species related resources for teachers.

Vector Disease Control International. *Mosquito Biology - Understanding the Life Cycle of the Mosquito*.  
<http://www.vdci.net/mosquito-biology-101-life-cycle>. Accessed December 14, 2020.  
Info on mosquito life cycle with images of each stage.

## VIDEO RESOURCES

Louisiana Department of Wildlife and Fisheries. Booker Fowler Fish Hatchery. *Paddlefish Spawn*.  
<https://www.youtube.com/watch?v=HhJwH5mGRjM>. Accessed December 7, 2020.

Video showing the Paddlefish Spawn at the Hatchery.

Moravek, Jessie. *The dam dilemma: how to balance hydropower, rivers & people (video)*.  
YouTube - Tedx Talks.

[https://www.youtube.com/watch?v=BmG5OzIW5\\_8](https://www.youtube.com/watch?v=BmG5OzIW5_8). Accessed December 11, 2020.

Great short lecture on the affects of dams on river ecosystems and how to balance the pros and cons of dams.

National Geographic. *Invasive Species 101 / National Geographic*. YouTube.

<https://www.youtube.com/watch?v=gYNAtw1c7hI>. Accessed December 11, 2020

Good short overview of invasive species and why they cause problems.

North Dakota Game and Fish Department. Paddlefish Stocking.

<https://www.youtube.com/watch?v=tQh-hPS1INs>. Accessed December 7, 2020

Cool video showing process of raising Paddlefish in hatcheries then releasing them into the wild

Reid, Bruce. Lower Mississippi River Conservation Committee. Paddlefish: Anatomy of a Living Fossil.

<https://www.youtube.com/watch?v=ZrEOOIID3QM&t=2s>. Accessed December 7, 2020.

Really good short video detailing basic overview of Paddlefish biology, ecology, behavior and conservation.

Texas Parks and Wildlife. Tracking Paddlefish.

<https://www.youtube.com/watch?v=U4WSXXzjnbq>. Accessed December 7, 2020.

Great video detailing some Paddlefish conservation efforts in Texas.

Wills, Betty. *The Paddlefish: An American Treasure* (video).

<https://www.youtube.com/watch?v=FONx-LEly0k>. Accessed December 7, 2020.

This video addresses all facets of the life of Paddlefish in the United States.

It's decades outdated but still worth watching. Released in 1995.