

NEBRASKAland Magazine's

Trail Tales



All About
WETLANDS

**WETLAND
WILDLIFE**

**Nebraska's
Wetland
Complexes**

**MIGRATION
GAME**

Spring • 2006

HOT TOPICS

DISCOVERING WETLANDS

The water's up to your ankles and a pungent smell reaches your nose. You move along slowly, watching a great blue heron fish for its lunch. When you round a bend you are startled by a flock of ducks as they take off from the water. A dragonfly zips by your head as you look around. Where are you? In a wetland of course. Wetlands are tremendously productive habitats and are most valuable in their natural state. Acre for acre, there's more life in a healthy wetland than there is in almost any other kind of habitat. These productive places support huge numbers of insects, fish, birds, reptiles and amphibians and much more.

The best way to learn about wetlands is to visit one. On pages 6 and 7 we provide a map of wetland locations that are open to the public and where you can explore the diversity of wetland life. You will also find cool activities, games and useful information like the critter

cards to help you learn about the value of Nebraska's wetlands. We hope this Wetland Activity Guide and other educational materials will help you develop a positive attitude about wetlands. By exploring marshes, ponds, and wetlands you will be able to see firsthand why these natural areas are so important to wildlife – and to people. 🐾

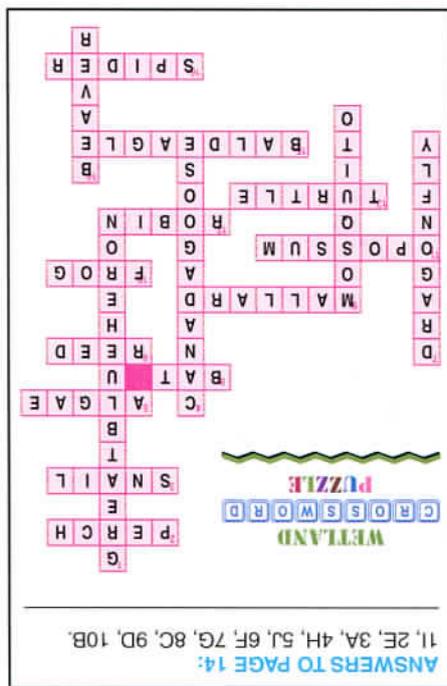


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Visit Nebraskawetlands.com to learn more about Nebraska wetlands and to learn how to obtain copies of the "Wetlands of Nebraska" educational VHS video or DVD and the *GUIDE TO NEBRASKA'S WETLANDS and their Conservation Needs*.

Front Cover: Its air sac inflated for maximum volume, a male northern cricket frog calls from a Lancaster County marshy area in June. Photo by Doug Carroll.

Back Cover: American avocets search for food before sunset at Kiowa Wildlife Management Area in Scotts Bluff County. Photo by Jon Farrar.

All About WETLANDS

By Andrea Cade

As you will learn in this issue, wetlands are year-round homes for mammals such as muskrats and mink, many species of frogs and other amphibians, and reptiles such as turtles and snakes. A few birds, including pheasants and birds of prey, use wetlands year-round, and hundreds of species of birds are part-time residents. Some spend the warm months on Nebraska wetlands to nest and rear their young. Others, mainly waterfowl and shorebirds, come by the tens of thousands, stopping for just a few days or weeks during spring and fall migrations.

Nebraska wetlands are also important for improving water quality, reducing flooding, and providing interesting areas for exploring and learning.

Wetlands change from season to season, and many even go dry, so it's hard to know exactly which areas are wetlands. Wetlands are places where the soil is soaked with water at least some of the time, creating muddy or flooded conditions where plants adapted to wet habitats can survive. They include marshes, lakes, wet meadows, forested swamps and backwaters. Oxbows along rivers and streams are also wetlands.

Playas, which are temporarily flooded, nearly circular low spots

formed by the wind in dry regions, are one kind of Nebraska wetland. They are located mostly in the western part of the state, but not in the Sandhills.

Sandhills wetlands occur in low spots in the Sandhills where groundwater is exposed. They can be saturated wet meadows, shallow marshes, or open-water lakes.

Fens are rare and unusual wetlands. They have slightly acidic water and soil called "peat," which consists of undecomposed plant parts. Peat forms where groundwater seeps into the fen.

Riverine wetlands include wet meadows, oxbows (old channels no longer connected to the river), and marshes as well as islands and sandbars within them.

Saline or alkaline wetlands get their minerals from groundwater, or from surface water that dissolves minerals on the land and carries them into the wetland. Western alkaline wetlands are caused by the high rates of evaporation that take place in that region. The salt in eastern saline wetlands comes from deposits deep underground that were once part of an ancient sea. Groundwater carries the salt to the surface. An early salt industry based on the saline water of springs and wetlands in the area led to the founding of Nebraska's Capital City, Lincoln. 🐾

WETLAND

Find these wetland wildlife and plant species:

Painted Turtle
Blue-winged Teal
Belted Kingfisher
Bluegill

Dragonfly
Tiger Salamander
Red-winged Blackbird
Raccoon
Great Blue Heron
Chorus Frog
Tadpole
Arrowhead
Cattail



WILDLIFE

Add the correct colors for each
by researching field guides or go
online to [http://animaldiversity.
ummz.umich.edu/site/index.html](http://animaldiversity.ummz.umich.edu/site/index.html)

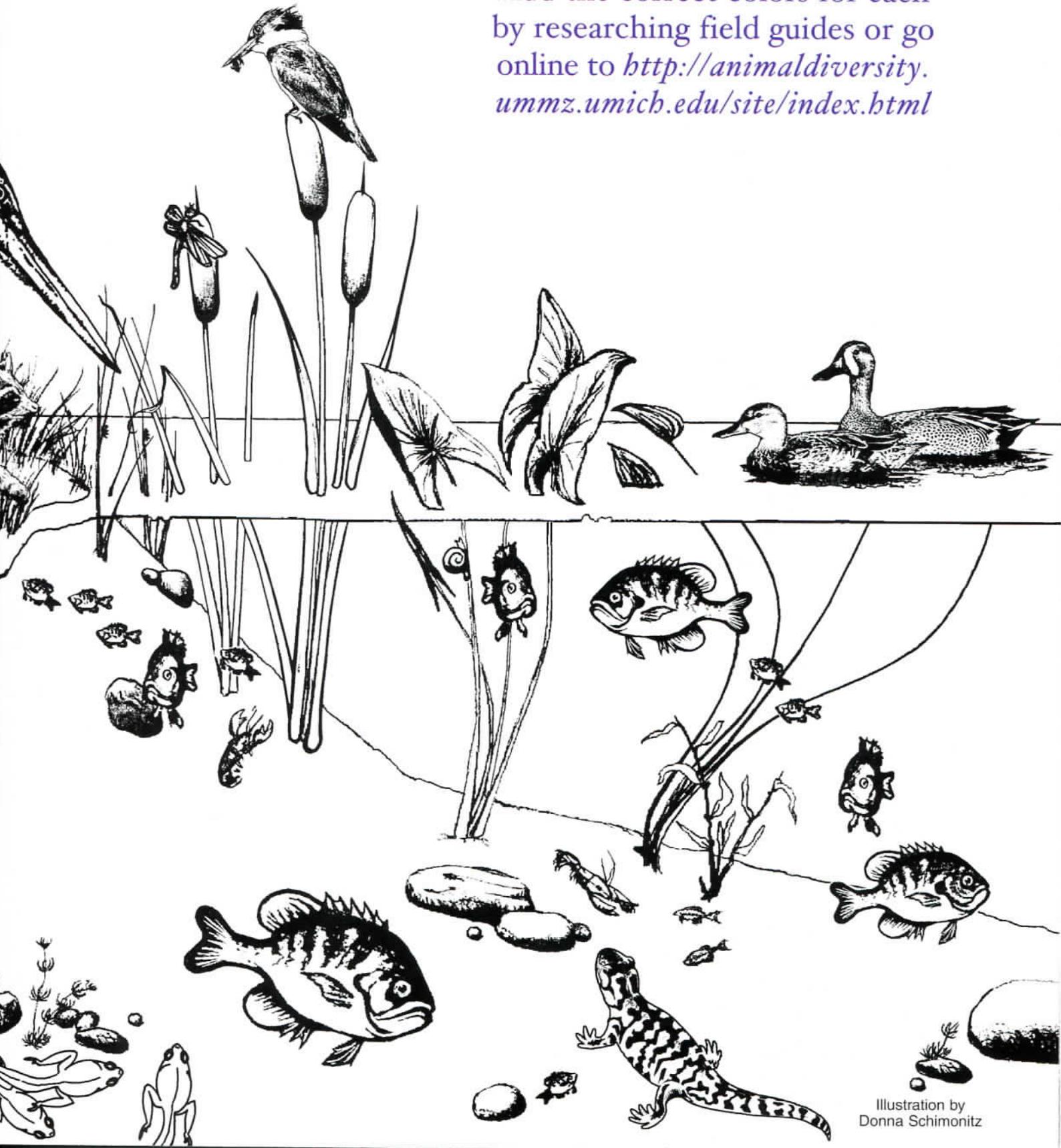
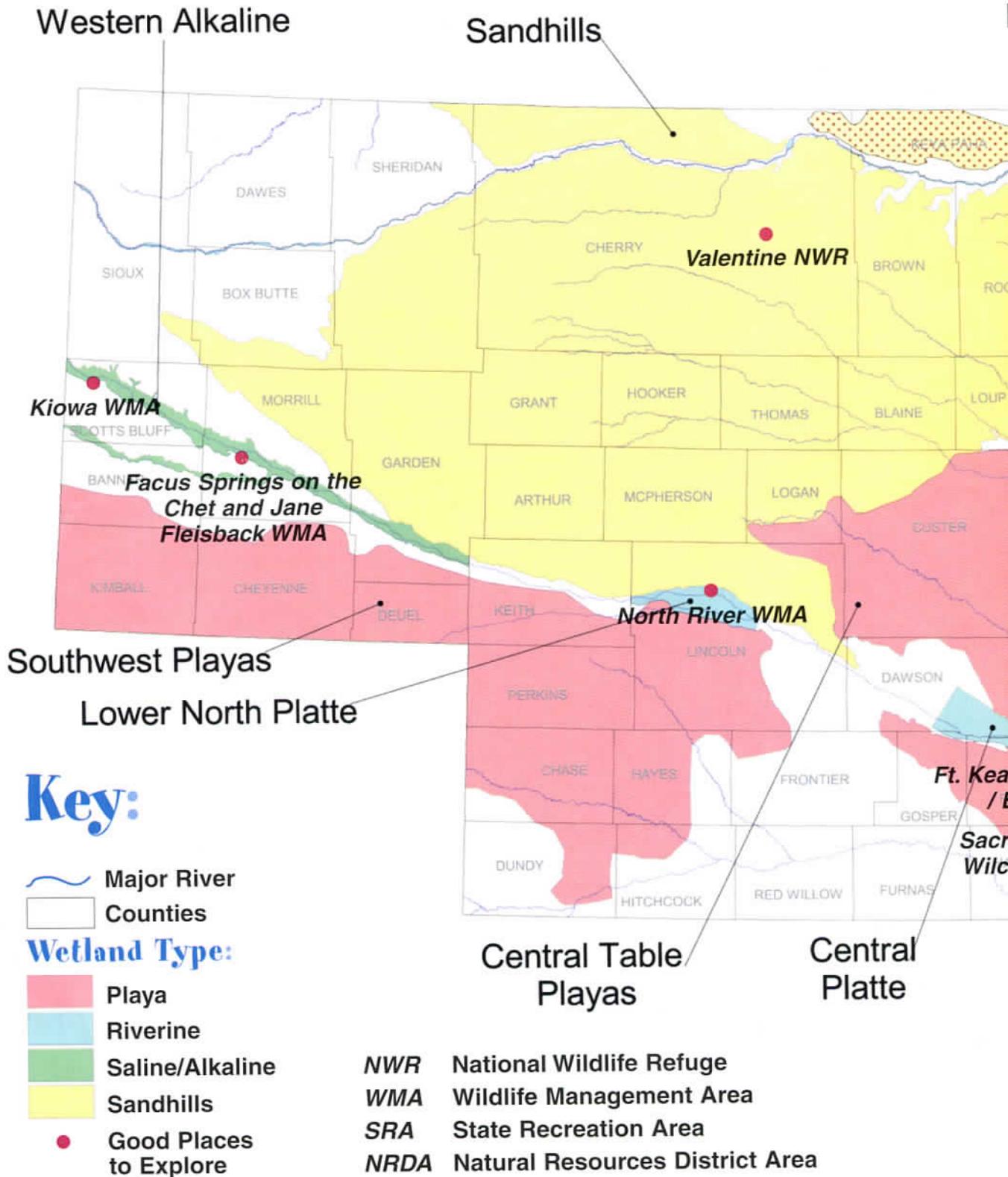


Illustration by
Donna Schimonitz

Nebraska's Wetlands

Some Places



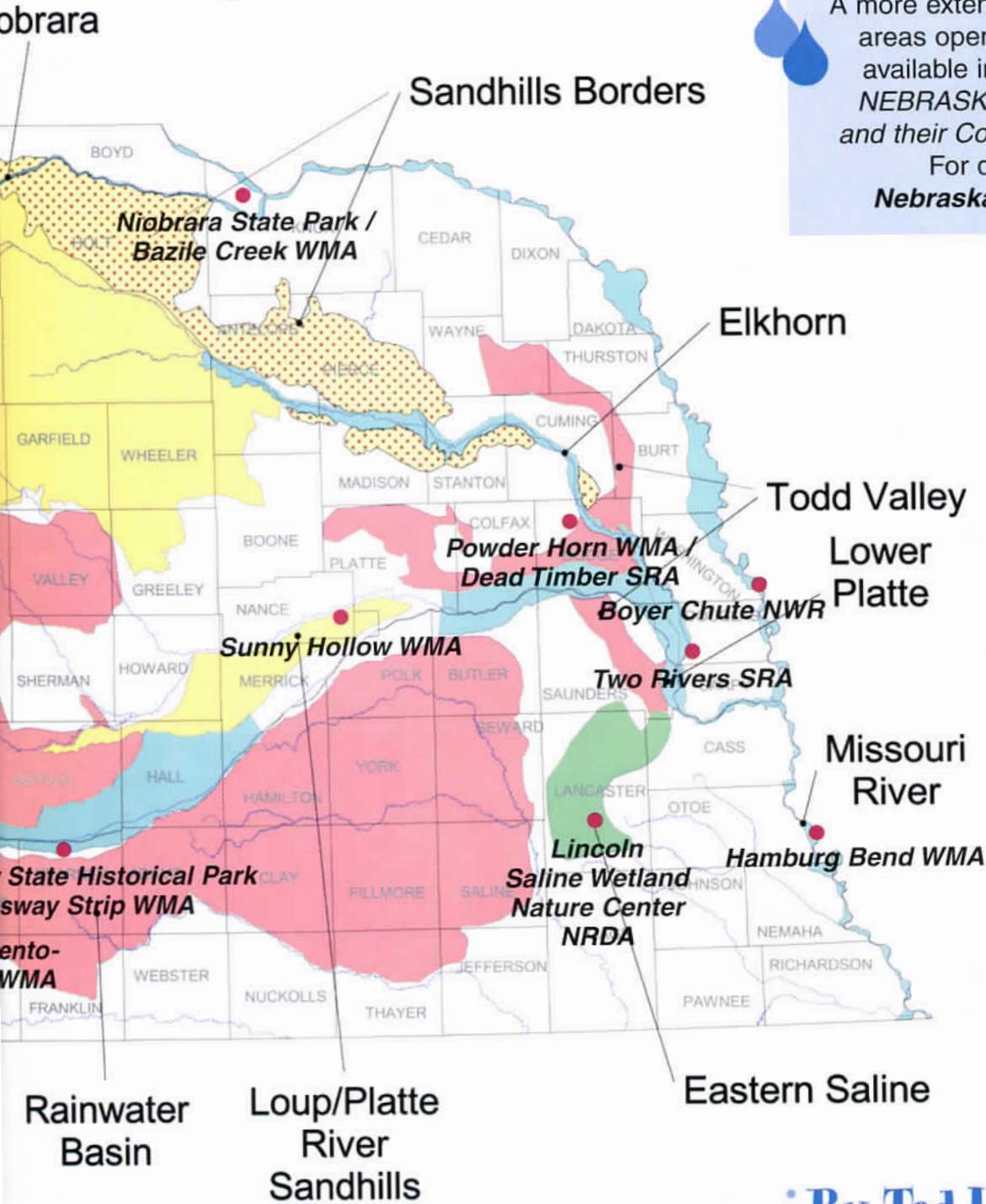
and Complexes

to Explore



A more extensive list of wetland areas open to public use is available in the *GUIDE TO NEBRASKA'S WETLANDS and their Conservation Needs*.

For details, visit Nebraskawetlands.com



By **Ted LaGrange**
and **Andrea Cade**

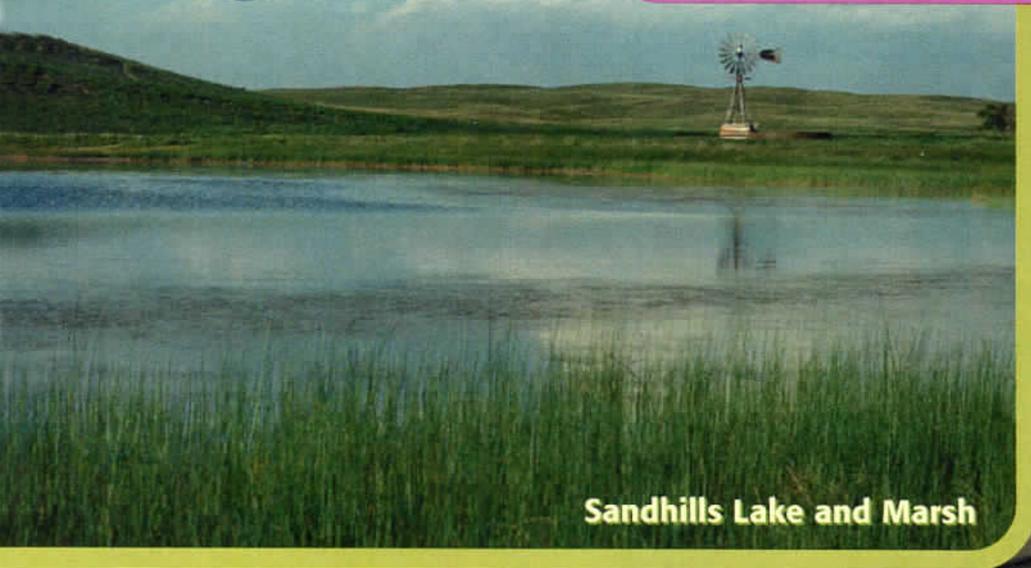
Wetland Diversity

Photos by Nebraska Game and Parks Commission staff

Nebraska's wetland resources are as diverse and dynamic as those of any state in the nation. They include marshes, lakes, river and stream backwaters, oxbows, wet meadows, fens, forested wetlands and seep areas.



Forested Missouri River

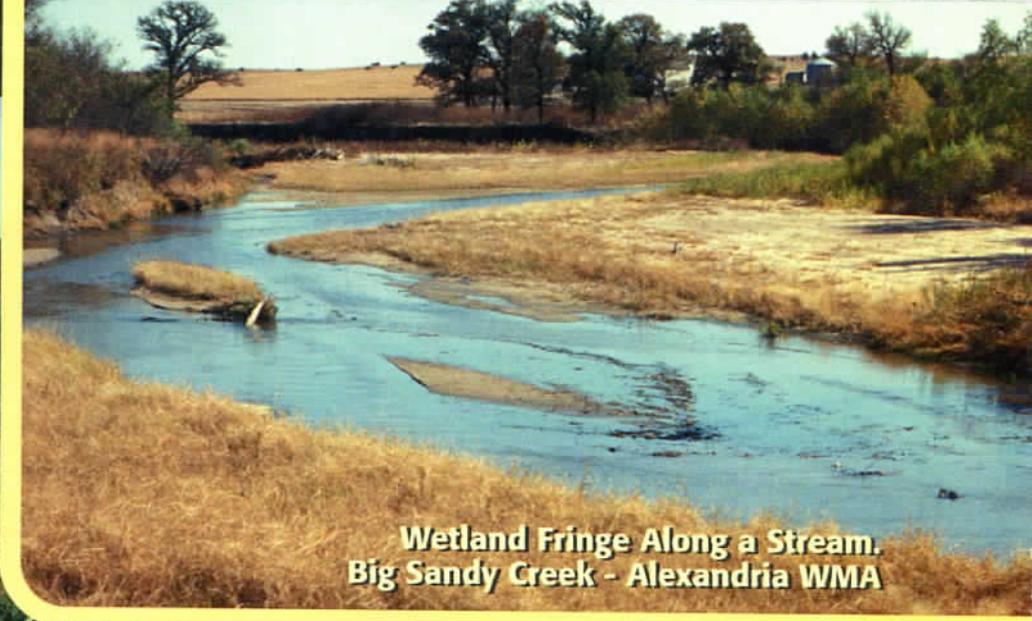


Sandhills Lake and Marsh





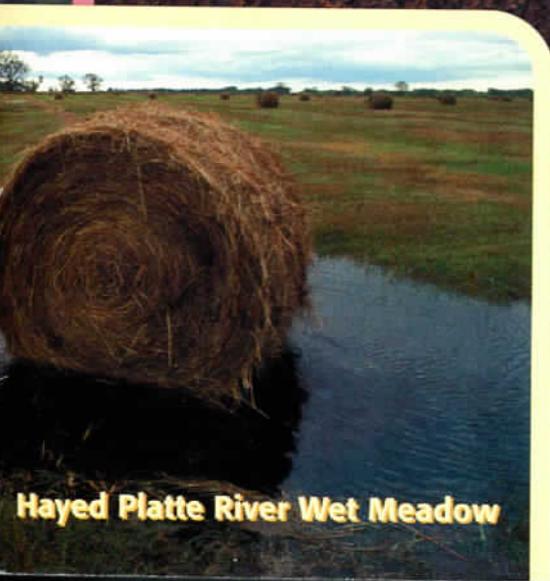
Southwest Playa in Farm Field



**Wetland Fringe Along a Stream.
Big Sandy Creek - Alexandria WMA**



Eastern Saline Wetland and Mud Flat



Hayed Platte River Wet Meadow

Background Photo: Platte River

Wetland FUNCTIONS

BY ANDREA CADE

Match the object to the statement it represents.

1. Wetlands provide a resting place for waterfowl and other birds. These migrants may spend several days or weeks on a wetland resting up during their journey.

2. Wetlands are important places for many baby animals. Wetlands provide protective cover from predators.

3. Wetlands store excess runoff (floodwater). Even after much of the water evaporates the soil will stay wet for some time. If you were to wring out a wetland you would be surprised how much water it holds.

4. Wetlands make dirty water clean. Some cities use wetlands to treat wastewater.

5. Wetlands filter out very small particles of pollution, such as toxic substances, pesticides and excess nitrogen in the water.

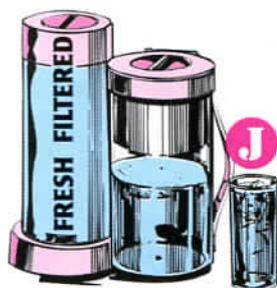
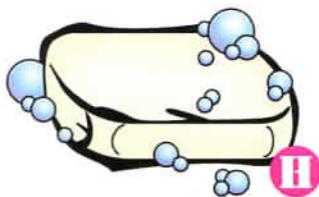
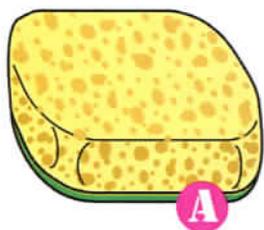
6. Wetlands filter out large particles such as dirt, mud and plant debris. The plants of a wetland trap these particles, which then settle to the bottom.

7. Wetlands provide an abundant source of food for waterfowl, which use it to refuel while on migration. This food includes aquatic plants and their seeds, plankton, frogs, and mammals.

8. Wetlands provide a home to many different kinds of animals, including threatened and endangered species.

9. Wetlands mix nutrients and oxygen into the water, which is important to wetland plants and animals.

10. Wetlands are enjoyed by hunters, hikers, birdwatchers, boaters, trappers and anglers. 🐾



Spring and summer rain in Nebraska signals male frogs and toads that it is



Gray Tree Frog

time to attract a mate. Each species begins

calling at different times of spring and summer. Often it isn't even possible to see what type of frog is calling, but you can tell by listening if you learn each species' song. If you are really good at the calls you may be able to create your own frog chorus.

To learn more about specific amphibian species or to hear recordings of their calls, go to Reptiles and Amphibians of Nebraska, a web site located at <http://snr.unl.edu/herpneb/>. This site has quizzes and tips for identifying frog calls. 

NEBRASKA FROGS AND TOADS

American Toad

Bullfrog

Great Plains Toad

Northern Cricket Frog

Northern Leopard Frog

Plains Leopard Frog

Plains Narrowmouth Toad

Plains Spadefoot Toad

Western Gray Treefrog

Western Striped Chorus Frog

Woodhouse's Toad

a musical trill lasting up to 30 seconds

a deep voice says "chug-o-rum"

a high-pitched, almost metallic trill

a shrill, measured clicking

a low, throaty snore of about three seconds, followed by clucking sounds

two or three guttural notes a second, sounds like a chuckle

a high-pitched, buzzing bleat like a sheep.

a grating note at one second intervals or a hoarse trill lasting one second

a hearty, resonating trill

a fingernail running over the teeth of a comb for one to two seconds

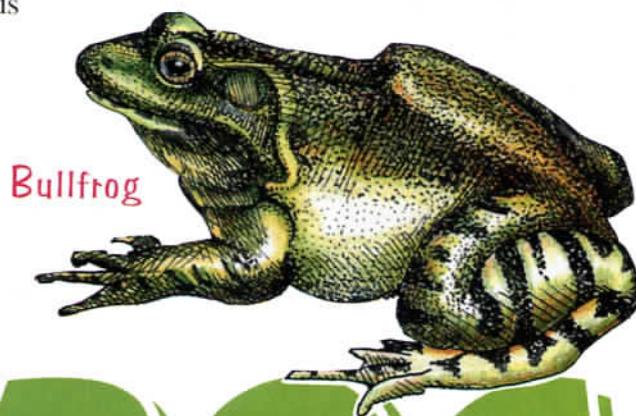
a shrill wail that sounds like a scream



Plains Leopard Frog



Chorus Frog



Bullfrog



Woodhouse's Toad

By Andrea Cade

FROG CHORUS

Breeding Grounds

Northern Nebraska Sandhills

START



FINISH

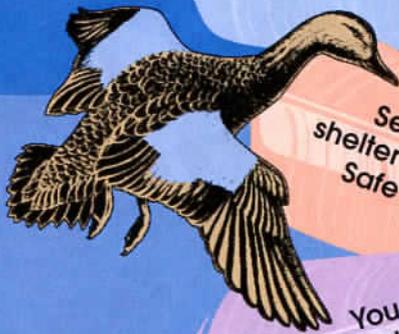
A Sandhills rancher provides a marsh and grass. Move ahead to FINISH, yeah!!

Lots of marshes still frozen. Go back one space.

Discover lots of microscopic aquatic insects to eat. Move ahead 3 spaces.

Busy day of swimming. Take a rest hidden in the grass. Stay one turn.

You are temporarily lost from the flock. Go back one space.



Seeking shelter in a marsh. Safe spot.

You are eaten by a fox. Go back to START.

A Nebraska farmer restores a wetland. Move ahead 2 spaces.

Invasive plants crowded out annual seed-producing food plants. Go back 3 spaces.

You have reached the Rainwater Basin area. Lay your head down and take a nap.

Get sick from avian cholera in shallow water. Roll around on the ground holding your head. Lose one turn.

Spend the day to replenish energy. Move on.

Trials and Triumphs of the Blue-winged Teal Migration

MIGRATION

HOW TO PLAY:

- 2-6 players
- each player rolls the die once
- follow instructions where you land
- first duck to make the round-trip wins!



Rainwater Basin Central Nebraska

WINTER TIME

eanine Lackey,
anna Schimonitz

Spend the day courting a mate. Flap your wings and quack loudly.

Get sick from old lead shot residue. Groan and hold your stomach. Lose one turn.

Platte River, Nebraska

Spend the next two days looking for a mate. Prance around holding your head high and flapping your wings.

Ideal weather conditions allow you to fly further than usual. Move ahead to the Platte River.

Developers drain a wetland for new homes and shopping centers. Go back to wintering grounds.

Move to cover to avoid predators. Hide under the table for one roll of die.

You locate a protected area to feed at a wildlife refuge along the Gulf Coast. Do a happy dance!

Water is released into a Texas wetland to create more habitat. Move ahead 2 spaces.

You are losing energy from the long flight. Flap your wings slowly.

Eat a snack and rest.

Major hail storm, you are grounded. Lose one turn.

You see a coastal wetland up ahead. You made it!

Day feeding, lost energy. Lose one space.

Wintering Grounds Central America



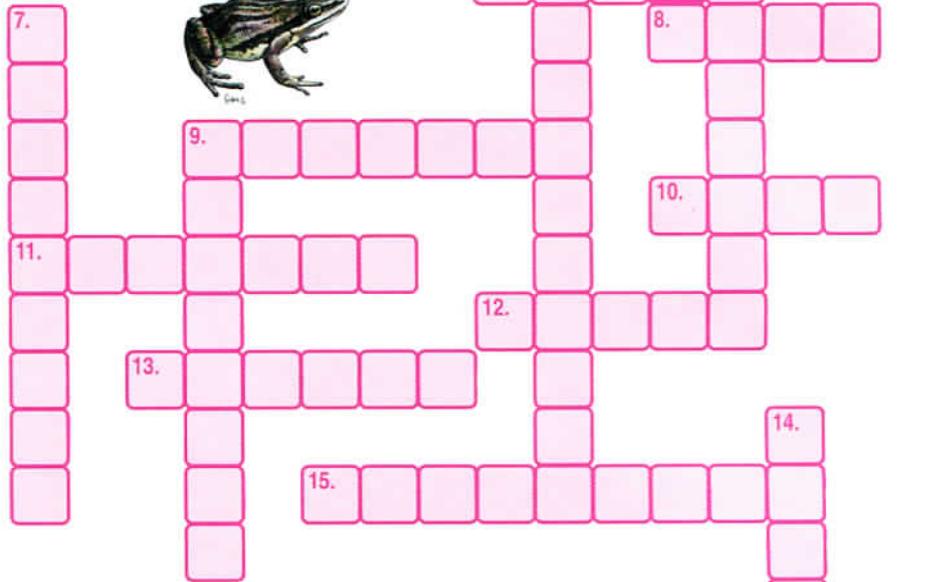
WETLAND

CROSSWORD

PUZZLE

ACROSS

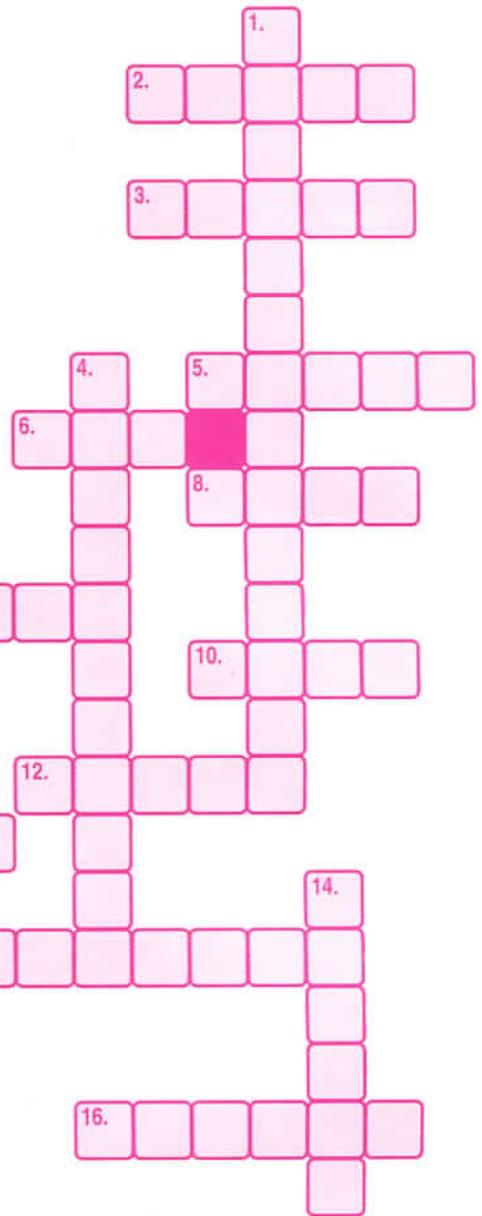
2. A small sport fish, and something birds do when they sit in a tree.
3. With only one foot, this creature slides along creating a trail of slime while carrying its home.
5. Small, green and slimy is how this aquatic plant looks and feels. It is often found on rocks, logs or floating in water.
6. A flying, nocturnal (active at night) mammal that eats insects, fruit or nectar but not people.
8. A saxophone won't play a tune without a _____. It is also a plant.
9. Males have a green head, while females are all brown for hiding on the nest.
10. An amphibian whose calls are a sign of spring. It uses its eyeballs to help it swallow food.
11. Passing out or playing dead is this nocturnal animal's defense from predators.
12. This common early bird has an orange chest, brown back, an almost black head and a white eye ring. It is often seen on the ground looking for worms.
13. A reptile that has a beak for eating and carries its house on its back.



15. This large raptor, the symbol of the United States of America, was once endangered. Now recovered, it can be found hunting for fish and will also scavenge ducks and other dead animals near water.
16. Most types of this arachnid (has 2 main body parts and 8 legs) hunt on land but at least one species hunts underwater.

DOWN

1. A long pointed bill helps this "great" wading bird hunt for frogs and fish.
4. A migratory bird that honks when it flies and feeds at parks, ponds and fields.



7. This beautiful, winged predator moves like an airplane while it hunts other insects. However, it does not breathe fire.
9. These pesky insects are a very important food source for bats, fish and other animals.
14. This animal can create new wetland habitat by damming up streams.



Recommended Reading

LEAPFROGGING THROUGH WETLANDS

Anderson, Field, Stephenson. Bright illustrations grace this activity book for ages 6-12. Discover the world of sedges, rushes, ducks and frogs by becoming wetland detectives. Travel through a wetland maze or fly with migrating waterfowl. Includes colorful wetland stickers. ISBN 0941042189

FUN WITH NATURE TAKE-ALONG GUIDE

Burns, Boring, Dendy. This superb compilation of six Take-along Guides helps children identify more than 150 plants and animals, including caterpillars, insects, butterflies, frogs, toads, turtles, snakes, salamanders, lizards, rabbits, squirrels and chipmunks, as well as clues such as tracks and scat. It also features activity pages and scrapbook pages for field notes. Ages 6-12. ISBN 1559717025

DISCOVER NATURE IN WATER AND WETLANDS, THINGS TO KNOW AND THINGS TO DO.

Lawlor. Explore the proper-

ties, processes, plants and animals associated with aquatic environments with this book. Students can investigate ponds, swamps, and other wet environments. There are dozens of activities for ages 7-14. ISBN 0811727319

WETLANDS Hickman. This hands-on guide reviews wetland plants, animals, and ecology. This piece includes activities and discussions of wetlands as natural filters, fish nurseries, and wildlife sanctuaries. It is the perfect introduction to aquatic environments for children ages 8-13. ISBN 1550741268

ANIMALS ALIVE! AN ECOLOGICAL GUIDE TO ANIMAL ACTIVITIES

Holley. This book is based on Louis Agassiz' advice to "study nature, not books." It shows how to study animals without harming them and provides practical, inexpensive and ethical alternatives to traditional life science laboratories. It shows how life science knowledge can be gained with no harm done to creatures. ISBN 1570981701

To learn more about Nebraska's wetlands visit Nebraskawetlands.com

FOR MORE INFORMATION...

See past issues of *NEBRASKAland Magazine* at your school or city library for more information on topics in this issue of *Trail Tales*.

Wetland Species: "Admiring Avocets," May 2005; "Tiger of the Marsh," March 2003; "Haven for Herons," October 1998; "Purple Loosestrife: The Rising Tide," July 1997;

Wetland Conservation: "Restoring Nebraska's Wetlands," March 2005; "Getting the Mud Out," April 2004; "Water for Wetlands," October 1998; "Wetland Reborn," March 1998

Wetland Types: "Nebraska's Rainwater Basin," March 1996; "Alkaline Wetlands of the North Platte Valley," June 1994;

"Nebraska Salt Marshes: Last of the Least," July 1991

Frogs: "Counting Frogs and Toads," August 2003; "Night Chorus," April 1991

Migration: "Spring Wings on the Platte," March 2003; "Mystery of Migration," January 1998; "Migration and Weather," January 1996

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