

NEW YORK STATE
Conservationist

**Hot
Kids!**

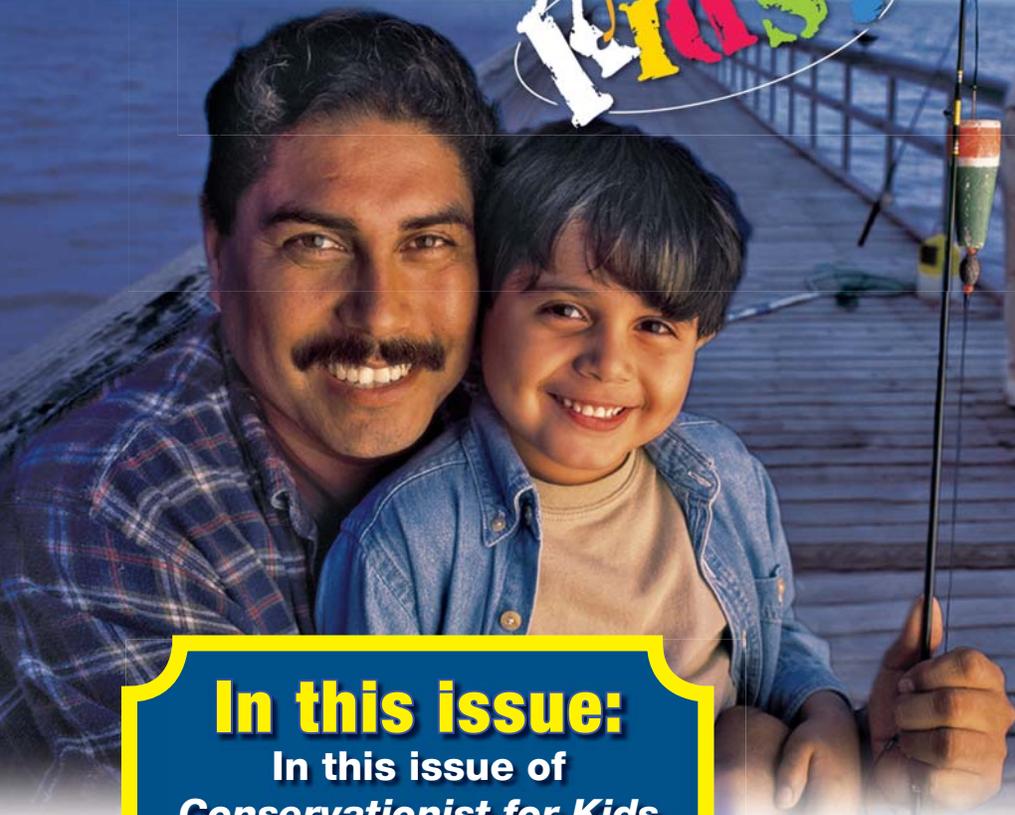


FISH!



Welcome to **NEW YORK STATE** **Conservationist**

for **KIDS!**



In this issue:

In this issue of *Conservationist for Kids* we'll learn about some of New York's **SPORTFISH**, the fish anglers enjoy fishing for. We'll share some fun things to do outdoors with you, exploring the places where fish live and how they survive in their watery world.

Want to receive **Conservationist for Kids** at home?

Subscribe to **Conservationist** magazine!

You'll get six issues of the award-winning **Conservationist** magazine each year, plus **Conservationist for Kids** in the October, February and April issues.



Send us a photo of yourself enjoying the outdoors.

Contact us at **Conservationist for Kids**
625 Broadway, 2nd Floor
Albany, NY 12233-4500

or e-mail us at **cforkids@gw.dec.state.ny.us**



Visit www.dec.ny.gov for links to lots of information about the outdoors. Check out DEC's online newsletter for families, *Outdoor Discovery*. Every two weeks readers receive articles about nature with fun activities for kids, plus lists of upcoming events at nature centers near you. Go to www.dec.ny.gov/public/43355.html to sign up and have it e-mailed directly to you.

Cover photomontage by DEC with images from the Recreational Boating and Fishing Foundation, Eric Engbretson and Bill Banaszewski.

FISH ARE FASCINATING

It's fun to watch them move through the water, whether singly or in "schools" (groups of fish). Where they live—their habitat—provides the food, water, shelter and space they need to survive.



Some freshwater fish,

like bluegill, live in shallow, weedy ponds and lakes. There are plenty of places to hide among the plants, whether they are searching for prey or avoiding predators. Since they're shallow, these waters can warm to over 80° F at times! Fish that need cooler waters may be found in deeper areas. Other fish, like trout, prefer cold water lakes, ponds and streams with temperatures less than 72° F.

Saltwater fish

are found in the ocean. Some, such as striped bass, travel into freshwater rivers like the Hudson to spawn (lay their eggs).



Be RESPECTFUL!

When you're outdoors, you're in the home of wildlife; you're in their habitat.



Don't litter. Eventually, what you leave on the land will be washed into the water. Clean up after yourself and others who have left a mess.



Observe, but don't disturb wildlife, and don't disturb other people who are there to enjoy the wildlife.



If you go fishing, know & follow regulations that apply to you and only keep the size and number of fish that you are allowed to keep. If you're not going to eat them, release the fish right away.



Hi, I'm Bob the bobber!

Follow me as I share my enjoyment of fish and fishing.



April 22, 2010 is the 40th anniversary of **Earth Day.**

Make every day Earth Day by showing respect for the environment. What will you do in honor of Earth Day?



Get Outdoors!

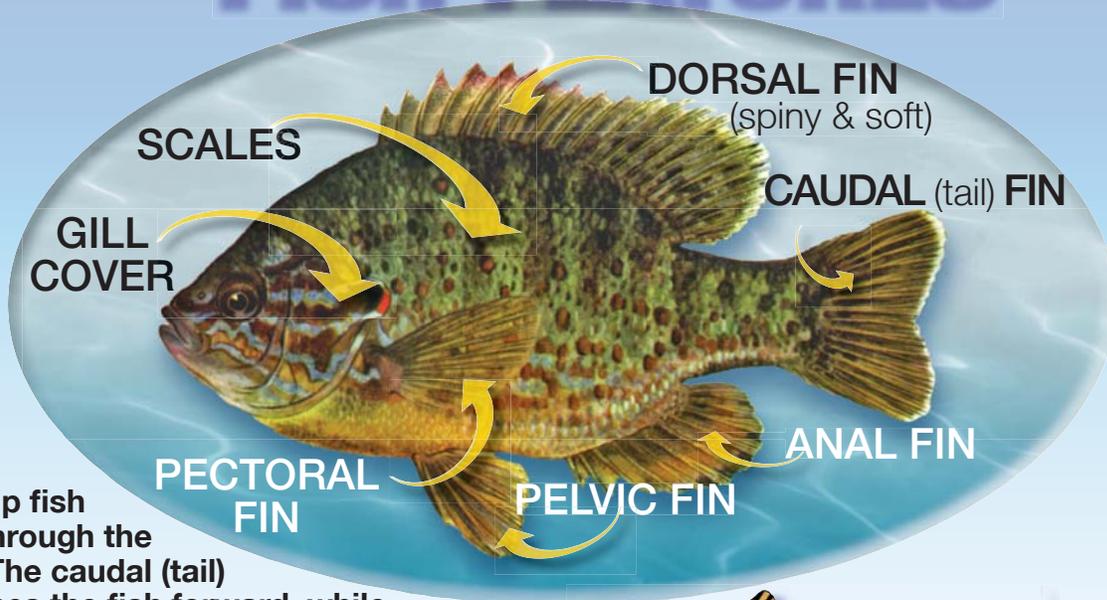
Fishing is a fun sport that can be enjoyed by anyone, no matter their age or ability.

You can enjoy it by yourself, with your family, or with a group of friends.

You may even end up with your own fish story to tell!



FISH FEATURES

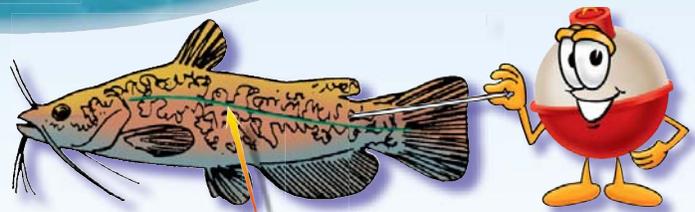


Fins -

Fins help fish move through the water. The caudal (tail) fin pushes the fish forward, while the other fins are used for steering and balance, to allow the fish to stay in one place, and to dive or rise to the surface.

Gills and Gill Covers - Fish get their oxygen directly from the water. Water enters the mouth and then passes over the gills, where the oxygen is removed. Gill covers protect the gills from injury. Without gills, the fish would not live.

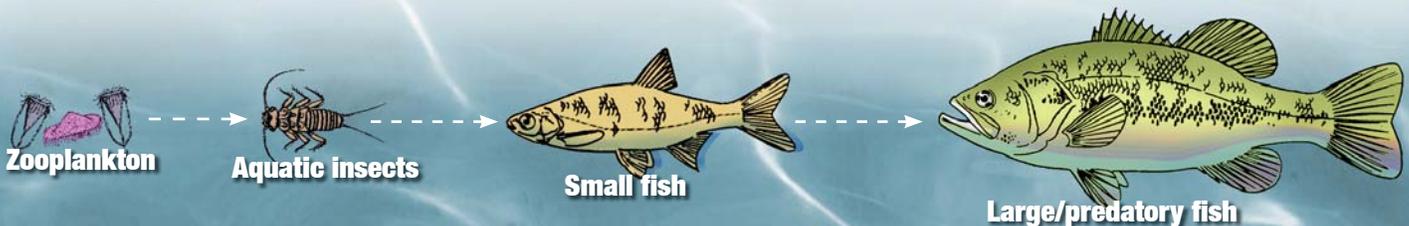
Scales - Scales cover the fish's body and help to protect it from injury and disease.



The **lateral line** runs along the length of a fish's body. It is made up of specialized cells and can sense vibrations caused by nearby fish and other aquatic animals. The lateral line helps fish to locate food (prey) and swim close together in schools without bumping into one another.

Aquatic Food Chain

A food chain shows the links between what an animal eats and what it is eaten by. This sample food chain might happen in a pond, lake or stream. Follow the arrows up the line to the "top predator."



Fish eat a variety of things. Large predators such as largemouth bass and chain pickerel eat other fish, as well as frogs, snakes, mice and even birds. Bluegills and pumpkinseeds eat insects and zooplankton—tiny underwater animals. The types and sizes of food that fish eat usually changes as they grow. Some fish, such as trout and sunfish, eat mostly insects and zooplankton their whole lives.



LET'S GO FISHING!

FISHING CHECKLIST

- 5-6 foot spincasting rod and reel combo using 8 pound test line
- Bobbers (1 inch)
- Size # 8 "Aberdeen" or "circle" hooks
- Bait (worms)
- New York State Fishing Regulations Guide

You need a fishing license if you are 16 years old or older. For details, visit www.dec.ny.gov/permits/6091.html or see the Fishing Regulations Guide.

SAFETY CHECKLIST

- Sunblock
- Sunglasses (polarized work best for seeing into water)
- Hat
- Drinking water and snack
- Take an adult along (They'll need a fishing license.)

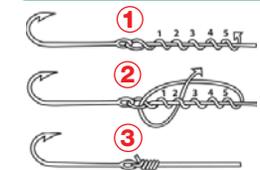
How do I get started?

Using a spincasting rod:

1. Press and hold down the reel's release button. Using wrist action (not the whole arm), slowly bring the rod straight up over your shoulder.
2. Next, gently sweep the rod forward, causing the rod to bend with the motion.
3. As the rod moves in front of you, reaching about the 10 o'clock position, release your thumb from the button.

The bend in the rod casts the bobber and bait out.

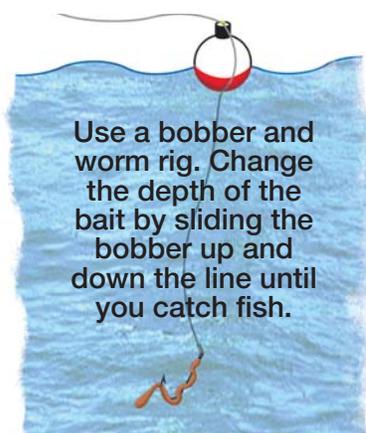
You have just made a cast!



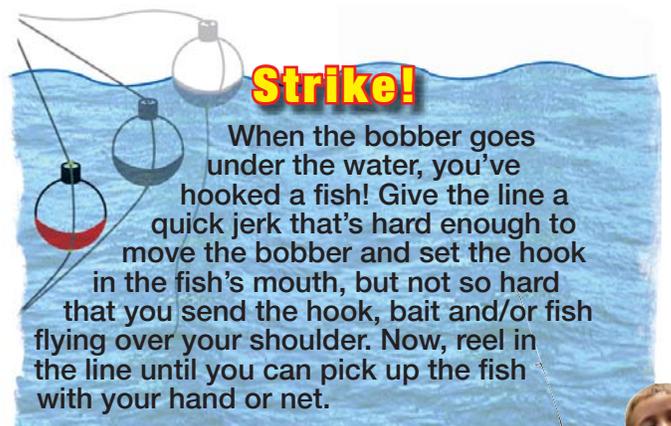
Use an improved clinch knot to attach your hook to the line.



Bait your hook as shown. You can use imitation baits if you don't want to use real worms.



Use a bobber and worm rig. Change the depth of the bait by sliding the bobber up and down the line until you catch fish.



Strike! When the bobber goes under the water, you've hooked a fish! Give the line a quick jerk that's hard enough to move the bobber and set the hook in the fish's mouth, but not so hard that you send the hook, bait and/or fish flying over your shoulder. Now, reel in the line until you can pick up the fish with your hand or net.

To take a fish off the line, hold it firmly around the body. Watch out for sharp spines on some fish's fins. To remove the hook, push it down and turn it so it comes out the way it went in.



COMMON SPORTFISH

Sportfish are the fish anglers enjoy catching.



Largemouth Bass

Average Size: 12-18 inches

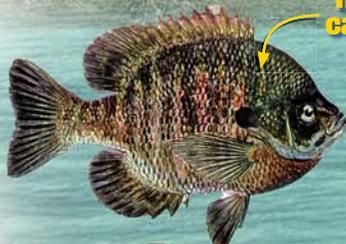
Most popular sportfish in New York State

Freshwater Fish Species

Habitat:

Shallow, weedy ponds and lakes

Usually the first fish caught by kids



Bluegill/Pumpkinseed (sunfish)

Average Size: 5-7 inches



Whiskers, or barbels, help to locate prey along the bottom.



Brown Bullhead

Average Size: 8-12 inches



Yellow Perch

Average Size: 6-12 inches

Fishy Fact: Often travels in schools with others the same size and age.



Chain Pickerel

Average Size: 15-20 inches

Lightning fast speed and razor sharp teeth make this one of the top predators in lakes and ponds.



Family Ties

Scientists group all living things into **"families"** of species that are related to each other. Some fish families look fairly similar, but not always!

Of the fish shown here, largemouth bass, smallmouth bass, rock bass, bluegill and pumpkinseed are all related and belong to the **sunfish family**.

Brook trout and **lake trout** are both members of the **trout family**.

OF NEW YORK STATE



Smallmouth Bass

Average Size: 10-16 inches

Fishy Fact: Pound for pound, the strongest freshwater fish.

Habitat:
Cold water lakes, ponds or streams



Brook Trout

Average Size: 5-9 inches (stream), 9-15 inches (lakes)
Fishy Fact: New York's official state freshwater fish.



Rock Bass

Average Size: 5-10 inches

Habitat:
Cool, deep, rocky areas

Red eyes make this fish look different from any other you might catch.



Lake Trout

Average Size: 15-24 inches

New York's largest native trout, and the trout with the longest lifespan.

The most sought after saltwater gamefish; can grow larger than 70 pounds!

Saltwater Fish Species

Habitat: Saltwater/Marine



Striped Bass

Average Size: 18-36 inches



Makes funny noises when caught

Striped Sea Robin

Average Size: 9-14 inches



Porgy (Scup)

Average Size: 8-14 inches

Fishy Fact: Swims in schools and shows black stripes when stressed.



Summer Flounder (Fluke)

Average Size: 12-24 inches

Easily camouflaged; has a flat body and changes color to match the bottom.



Bluefish

Average Size: 6-20 inches

Fishy Fact: Nickname when small is "snapper"; is a ferocious predator when bigger.

Come to DEC's **FREE FISHING CLINICS** this spring and summer to try fishing. Visit <http://www.dec.ny.gov/outdoor/27123.html> for schedules and information.

MASTER CASTERS

It's not how far you can cast, but getting your cast to land where you want it to that makes you a master caster. Practice makes perfect, so let's have some fun! You can do this outdoors in the yard, or indoors in the gym. Just watch out for the ceiling lights!

You'll need:

- **Spincasting rod** (basic fishing pole) (If you don't have a rod, use a stick with a piece of fishing line or string tied to one end.)
- **Casting plug(s)** - They're much safer than hooks when practicing. Use an improved clinch knot as seen on page 5 to tie the plug to the end of your line. (Alternate: use washer or heavy nut)
- **Hula hoop(s)**, garbage can or other casting target.



Let's get started...

Cast your plug so it lands inside the target. (See page 5 casting instructions.) Move the target farther away as you get better. Remember, safety comes first so

always look behind you before you cast!

Fish Finder

1. Read pages 6 and 7 to learn about New York's sportfish, then fill in the blanks below with the best match.
2. Copy the circled letters, in order, into the bottom spaces to find a special message.

Member of the sunfish family

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New York's state freshwater fish

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Has a flat body

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A top predator

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Can grow larger than 70 pounds

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The strongest freshwater fish

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The Message is:

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For more information:

Follow links from these web pages to lots of information about fish and fishing.

www.dec.ny.gov/animals/269.html Freshwater Fishes

www.dec.ny.gov/outdoor/fishing.html Fishing

This aquatic resource education publication is funded by anglers and boaters through a Federal Aid in Sport Fish Restoration grant



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

New York State CONSERVATIONIST FOR KIDS Volume 3, Number 3, Spring 2010

David A. Paterson, Governor of New York State



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Conservationist for Kids

Supplement for Classroom Teachers – “Fish!”

Fun with Fish

Whether it’s bass from the Finger Lakes, bluefish from the waters around Long Island, sunfish from a backyard pond, or goldfish in a bowl, people are fascinated by fish. We watch them slip through the water and wonder at their agility. We pucker up our lips and suck in our cheeks to make fish faces at each other. Let’s face it, fish are fun.

Studying fish introduces natural science concepts to youth: food chains, habitat and adaptations to a specific environment. Anatomy and movement can be easily observed by simply keeping a small tank of fish in the classroom.

For many New York State families, fun with fish includes fishing—often a tradition shared from one generation to the next. For others, it’s an outdoor activity they’re curious about but not sure how to begin. For those who are interested in trying fishing but don’t want to invest in the equipment, some public libraries loan fishing rods and tackle to patrons. In addition, the New York State Department of Environmental Conservation (DEC) offers free fishing clinics which include instruction and equipment. See www.dec.ny.gov/outdoor/27123.html for the 2010 schedule.

This Issue’s “Outside Page”

Master Casters is a great activity for hand-eye coordination, as well as developing an appreciation for the skills involved in fishing. *Fish Finder* will encourage students to carefully read about New York’s sportfish to complete the activity. *Fish Finder* answers, in order, are: bluegill, brook trout, flounder, pickerel, striped bass, smallmouth; the hidden message is “go fish.”

Teacher Workshops

For teachers who have participated in a Project WILD Aquatic or Project WET workshop, the activities listed below complement the spring 2010 issue of *Conservationist for Kids*. Visit www.dec.ny.gov/education/1913.html for information about workshops and about how to obtain curriculum and activity guides.

Project WILD Aquatic: Designing a Habitat; Fashion a Fish
Project WET: Water Address

Conservationist for Kids (C4K) and an accompanying teacher supplement are distributed to public school fourth-grade classes three times each school year (fall, winter and spring). If you would like to be added or removed from the distribution list, your contact information needs to be changed or you have questions or comments, please e-mail the editor at cforkids@gw.dec.state.ny.us

Printable activity sheets and links to other resources are on DEC’s website. You will also find back issues of C4K and the activity sheets and teacher supplements associated with each of them. Visit www.dec.ny.gov/education/40248.html

Subscribers to our e-mail list receive messages from the editor about the magazine, plus supplementary materials for educators who use the magazine in classrooms and non-traditional settings. In addition, subscribers receive information about resources and notification of training opportunities for connecting youth to the outdoors and to environmental issues. Visit http://lists.dec.state.ny.us/mailman/listinfo/conservationist_for_kids to subscribe to our e-mail list.

Supplemental Activities for the Classroom

“If I were a fish...”

Have your students write and illustrate a story about a fish. If they're stuck on how to begin, have them start with, “If I were a fish...” and describe what kind of fish they would be and what their life would be like. Descriptions should include something about how they would move, what their habitat would be like, and what their prey and predators would be.

Responsible Fishing

Visit your local DEC office and pick up a few copies of the *New York State Fishing Regulations Guide* (also available online at www.dec.ny.gov/outdoor/7917.html). Review the booklet with your students, and discuss which regulations would apply to them (or to their parents) when they go fishing. What other information in the guide is useful to anglers? (e.g., fish identification, preventing the spread of invasive species, etc.) Borrow some spincasting rods from your local public library or sportsman's club, and try the *Master Casters* activity from the back page of this issue of C4K.

Visit a Fish Hatchery

Take your class on a field trip to one of the 12 fish hatcheries operated by DEC. Numerous fish species are reared for stocking into more than 1,200 public waters across the state. All hatcheries are open to the public from spring through fall, and several are open year-round. A map showing where the fish hatcheries are located, a link to frequently asked questions and contact information for individual hatcheries is available at www.dec.ny.gov/outdoor/7742.html

Fish in the Classroom

Observing fish directly is a great way to learn about them. By keeping fish in the classroom, students learn about their physical features, watch how they move and see water passing into their mouths and out through their gills as the fish breathe. They also learn valuable lessons about caring for animals. The least expensive way to keep fish in the classroom is to have a few goldfish in a fishbowl. Alternately, “Trout in the Classroom”—www.troutintheclassroom.org—is a great way to get students involved in raising fish from eggs for release in local waters. Trout in the Classroom programs begin each September and operate until the fry (young fish) are released the following April.

Resources about Fish

Fish (DVD) Bill Nye “The Science Guy” (Disney Educational Productions, 2005)

Fish Watching: An Outdoor Guide to Freshwater Fishes by C. Lavett Smith (Cornell University Press, Ithaca, NY, 1994)

National Audubon Society First Field Guide: Fishes by C. Lavett Smith (Scholastic Publishing, NY, 2000)

Pond Life: A Guide to Common Plants and Animals of North American Ponds and Lakes by George K. Reid (Golden Press, New York, 1987)

Freshwater Fishes www.dec.ny.gov/animals/269.html

DEC color brochures of New York wildlife, including fish www.dec.ny.gov/pubs/4791.html

Resources about Fishing

The Biggest Fish in the Lake by Margaret Carney (Kids Can Press, Toronto, Canada, 2001)

Getting Started: A Beginner's Guide to Freshwater Fishing by Gregory Kozlowski, New York State Department of Environmental Conservation, Albany, NY

A Guide to Fresh and Salt-water Fishing by George S. Fichter and Phil Francis (Golden Press, New York, 1987)

The Kids' Book of Fishing by Michael J. Rosen (Workman Publishing Co. Inc., New York, 1991)

Sportfishing and Aquatic Resources Handbook by Bob Schmidt (Kendall/Hunt Publishing Co. Dubuque, Iowa, 1991)

DEC's gateway web page to fishing information and resources www.dec.ny.gov/outdoor/fishing.html

“Take Me Fishing” from the Recreational Boating and Fishing Foundation www.takemefishing.org/

Recreational Boating and Fishing Foundation – educational resources www.rbff.org/page.cfm?pageID=207

DEC-TV “Fishing for Bluefish” (Use the scroll bar on the right-hand side to watch “I FISH NY Program—New York City,” “Urban Fishing in New York” and “Fly Fishing.”) www.dec.ny.gov/dectv/dectv65.html