

**NIE** Connect with your environment  
Learn about environmental issues, in your community and how you can get involved.



ANNA MCCARTNEY/Contributed photo

Although life for fish begins after spawning, the naked eye can see little change in these eggs, which will hatch in about 60 days. PFBC fish culturists Scott Fedei, left, and Craig Lucas help with the project.

## Let's go fishing for these words

By ANNA McCARTNEY  
Contributing writer

In today's "Stocking stuffer" story, find these words about steelhead.

**Anadromous:** Migrating upriver from the sea or large lake to breed.

**Brood stock:** Male and female adults of a species kept for breeding purposes.

**Fingerling:** A young or small fish (approximately one inch in size).

**Fry:** A small fish, especially a young, recently hatched fish.

**Imprint:** To establish firmly in the mind. (Fish memorize the chemical

makeup of water to allow them to return to that same water to spawn.)

**Semelparous:** Die after spawning.

**Smolt:** A young steelhead at the stage at which it migrates from tributaries to the lake.

**Spawning:** To deposit eggs; produce offspring (fertilization where egg and sperm are combined to form embryos).

ANNA McCARTNEY, a communications and education specialist for Pennsylvania Sea Grant, can be reached by e-mail at axm40@psu.edu.



ANNA MCCARTNEY/Contributed photo

Starting every November and continuing through February, Pennsylvania Fish and Boat Commission staff capture steelhead from the commission's own brood stock at Trout Run and Godfrey Run for artificial reproduction efforts to maintain a world-class fishery.

# Stocking stuffers

## Steelhead program keeps streams full for anglers

By ANNA McCARTNEY  
Contributing writer

*Editor's note: As you read this article, notice the bold-faced words. Find the definition elsewhere on the page and build your vocabulary.*

Trout Run and Godfrey Run in Fairview Township are nursery waters for fish that will provide Pennsylvania with some of the best steelhead fishing in the country.

Starting every November and continuing through February, Pennsylvania Fish and Boat Commission (PFBC) staff capture steelhead from the commission's own brood stock there for artificial reproduction efforts to maintain a population that anglers expect.

Last year, about 2,000 steelhead were captured for their eggs and sperm, which are removed from the fish by applying gentle pressure to the abdomen. Each female produces between 3,000 and 5,000 eggs, which are combined with the male sperm to fertilize the eggs.

The fertilized eggs are transported from the Fairview State Fish Hatchery to the Tionesta State Fish Hatchery for incubation and hatching. After reaching fingerling size, some are transported to the state hatcheries in Fairview and Linesville. They are raised at these sites for approximately 14 months.

Once they reach smolt size, they are ready to be stocked in 12 Lake Erie tributaries open to public fishing. PFBC also provides eggs and fry to cooperative nurseries that likewise raise and stock steelhead in Lake Erie tributaries.

The smolt remain for approximately seven weeks while they imprint on those streams.

They then migrate into Lake Erie, where they will

remain for one-and-a-half to two-and-a-half years of feeding and growing. From fall through spring, they return to their imprinted stream to spawn.

Unlike salmon, which are semelparous, steelhead don't always die after spawning.

Instead, they return to the lake as the stream temperatures rise and live in the colder water, feeding and growing bigger until the next year's run.

While Erie County is the only place in Pennsylvania where you can fish for steelhead and they thrive here, these anadromous fish are not native.

Their natural reproduction in the wild is very minimal because they require a gravel base for spawning and Lake Erie streams are mainly shale-bottomed.

The program to raise and stock steelhead began in the late 1960s and the original eggs came from the state of Washington.

In 2013 a total of 1,847,488 yearling steelhead or smolts were stocked by the fishery agencies of Lake Erie to provide plentiful opportunities for anglers.

Of these, Pennsylvania stocked 1,072,410 because stocking steelhead adds more than fish to the region.

A 2003-04 study conducted under the direction of Pennsylvania Sea Grant and PFBC suggested the economic impact from the steelhead fishery was approximately \$11 million and more than 200 jobs.

It's no wonder the PFBC works hard to ensure that steelhead offspring and anglers will return to Lake Erie tributaries each year.

Join us again on Jan 6 for more about steelhead biology.

ANNA McCARTNEY, a communications and education specialist for Pennsylvania Sea Grant, can be reached by e-mail at axm40@psu.edu.



ANNA MCCARTNEY/Contributed photo

Brian Berchtold, right, observes PFBC fish culturist Jeff Kightlinger as he prepares fertilized steelhead eggs for their trip to the Tionesta State Fish Hatchery.



PFBC

In two months, these steelhead smolt will be released in Lake Erie tributaries, where they stay for about seven weeks while they imprint on those streams.



ANNA MCCARTNEY/Contributed photo

Steelhead fishing plays an important role in the Erie economy, bringing millions of dollars to the area each year.

yourSPACE  
a place to share



CONTRIBUTED PHOTO

Perseus House School of Excellence students and their teacher, Kathleen Ryan, left, gather at Chautauqua Beach, the site of their school cleanup.

## Chautauqua Beach benefits from cleanup

Perseus House School of Excellence students and teacher Kathleen Ryan filled five bags with trash they collected in their neighborhood, which includes Chautauqua Beach, for the International Coastal Cleanup. Many of the items they collected were one-use plastic items. The data they collected was added to the PA Lake Erie ICC and sent to the Ocean Conservancy to be added to the worldwide totals.

In addition to the cleanup, Ryan's students will be involved in another stewardship project this year. Ryan is one of eight teachers participating in the Pennsylvania Sea Grant Great Lakes, Great Stewards project, which provides funding and support for field trips and stewardship activities through the Center for Great Lakes Literacy (CGLL), a partnership between the Great Lakes Sea Grant Network and the USEPA Great Lakes National Program office. For more information about CGLL, contact Marti Martz at mam60@psu.edu or 217-9011, extension 104.

Below are some student

comments about their cleanup:

The International Coastal Cleanup was fun. It was nice to pick up around the community but I was disappointed by how much garbage was at the beach.  
— Courtney Salisbury

I did the cleanup because I felt bad for the animals that could get hurt from all the garbage left on the beaches.  
— Cassidy Wygant

I think it (ICC) is good not only for us, but for the environment. I'm glad that we could help clean up a bit.  
— Evan Stadler

The ICC was actually really cool. My friends and I collected a lot of garbage. I hope I can do it again.  
— Amber Carr

Not only do you get to help the Earth by cleaning the environment, but maybe you will get to experience saving a life like I did! I saved a fish that was flopping out of the water and threw it back in.  
— Courtney Cook

This page brought to you by:



Check out these websites to learn more:

http://fishandboat.com/steelhead.htm  
www.fws.gov/hagerman/tour/hatchery.html  
www.paseagrant.org

Pennsylvania has a very strong fishing heritage. Year-round fishing plays a huge role for the local economy. How often do articles appear in the sports section about fishing in this region?

Do you fish? Share your thoughts about fishing and why maintaining a healthy fishery is important.

