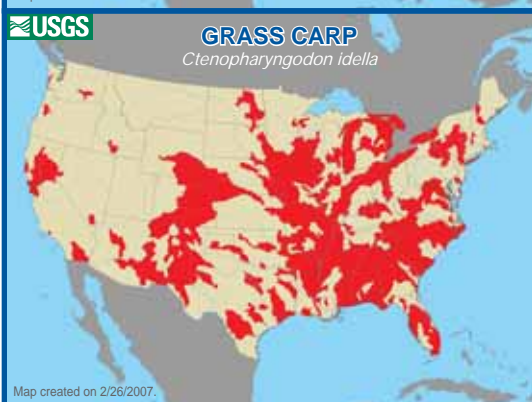
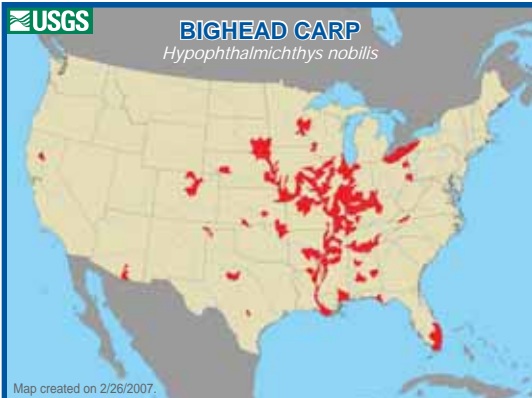


Asian Carp

Bighead Carp (*Hypophthalmichthys nobilis*)
Silver Carp (*Hypophthalmichthys molitrix*)
Black Carp (*Mylopharyngodon piceus*)
Grass Carp (*Ctenopharyngodon idella*)



“Asian carp” refers to four different species: the bighead, silver, black, and grass carp. Although they are not yet breeding in Pennsylvania waters, there is great concern that Asian carp could become a dominant fish in the Commonwealth’s lakes and rivers.

Native & Introduced Ranges

The bighead, silver, and grass carp are native to eastern Asia and China. The black carp is native to eastern Asia, eastern Russia, and Vietnam. Each of these carp was introduced into the United States for different purposes, but they all pose a great threat to Pennsylvania’s aquatic systems.

Spread

Bighead and silver carp were introduced into aquaculture and wastewater treatment facilities to control algae and accidentally escaped into the Mississippi River during floods in the early 1980s. They have since moved upriver and have become the most abundant fish in some regions of the Mississippi, Ohio, and Illinois rivers. Black carp were brought to the United States to control snail populations in aquaculture facilities and escaped from Osage River holding ponds in Missouri in 1994.

Recent collections suggest that the black carp are established in the lower part of the Mississippi River basin. Grass carp were imported into aquaculture facilities in Alabama and Arkansas in 1963 to control vegetation in ponds. They were widely stocked and their range was expanded by intentional and non-intentional releases. Many of the 45 states where grass carp are now found, including Pennsylvania, have banned the stocking of native (diploid) grass carp, but allow the stocking of triploid (genetically sterile) grass carp with a permit.

Impacts

Threat to Biodiversity

Asian carp are a threat because of their large size, reproductive success, and ability to consume large amounts of food year round, damaging the habitat and disrupting the food web. Because they feed on vegetation and plankton, as well as aquatic insects and native fish larvae, they are in direct competition with native mussels and other fish. Grass carp are known to wipe-out aquatic vegetation in lakes, altering the lake habitat and interfering with the reproduction of other fish. Black carp feed primarily on mussels and snails. They can eat three to four pounds daily, which threatens native mollusk and snail populations as well as mollusk-feeding fish and birds.

Economic Costs and Safety Concerns

Asian carp can be hazardous to boaters and water sport enthusiasts. The silver carp, when startled by the sound of passing motor craft, can jump six to ten feet out of the water and into moving boats causing property damage and injuring boaters. Being hit by a jumping carp is like being hit with a bowling ball. Water skiing and jet skiing become very risky in areas with large numbers of silver carp.



Grass Carp.
Photo courtesy
of U.S.
Geological
Survey.

ASIAN CARP



Grass Carp.

Photo courtesy of U.S. Geological Survey.



Extension • Education • Research

Sea Grant is a partnership of The Pennsylvania State University, The Commonwealth of Pennsylvania, and NOAA.

Penn State is an affirmative action, equal opportunity university.

Lake Erie Office
814-217-9011
sng121@psu.edu

Delaware Estuary Office
215-806-0894
afaulds@psu.edu



Funded in part by PA DEP Coastal Zone Management

Prevention & Control

A electric dispersal barrier constructed across the Chicago Sanitary and Ship Canal is being used to stop these invaders from entering the Great Lakes. This barrier creates a strong electrical field across the canal to deter the carp from moving upriver.

However, barriers will not prevent people from moving carp from one body of water to another. Young Asian carp can be misidentified as common baitfish, which means they might be transferred by bait bucket. Never release unused baitfish to the wild. Drain water from boats, live wells, and bilges before leaving any water access. Learn to identify the four Asian carp; early detection of new populations will help in their control.

It is unlawful in Pennsylvania to possess, sell, or purchase live silver, bighead or black carp. It is also unlawful to introduce or import these species into Pennsylvania waters. Never release plants, fish, or animals into a body of water unless they originated from that body of water.

Description & Biology

Several species of Asian carp can grow to weigh over 100 pounds and four to five feet in length. They are well suited to reproduce in Pennsylvania streams and lakes because the climate is similar to their native range. Female Asian carp may produce over one million eggs in one season and prefer to spawn in the flowing waters of large rivers.

Photo courtesy of David Riecks, Illinois-Indiana Sea Grant.



The bighead carp is a large, narrow fish with a scale-less head and eyes that project downward.

Photo courtesy of U.S. Geological Survey.



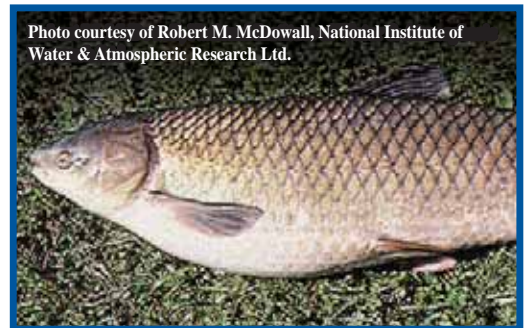
The silver carp looks very similar to the bighead carp; however it has a smaller head and an upturned mouth without teeth.

Photo courtesy of Rob Cosgiff, Illinois Natural History Survey.



The black carp has an elongated, narrow body with a blunt head and a slightly down-turned mouth that lacks barbels.

Photo courtesy of Robert M. McDowall, National Institute of Water & Atmospheric Research Ltd.



The grass carp is silvery white in color and has a long, slender body with large scales. It lacks both a down-turned mouth, and barbels.

References:

Foreign Nonindigenous Carps and Minnows (Cyprinidae) in the United States – A guide to their Identification, Distribution, and Biology. 2005. U.S. Department of the Interior, U.S. Geological Survey. Scientific Investigations Report.

Jennings, Dawn. 1988. *Bighead Carp: A Biological Synopsis*. US Fish and Wildlife Service.

<<http://govdocs.aquatic.org/cgi/content/abstract/2004/915/9150430>> (Accessed December 20, 2006).