

# AIS

## Aquatic Invasive Species

### SILVER CARP



Photo compliments of Illinois Natural History Survey

**COMMON NAME:** Silver Carp

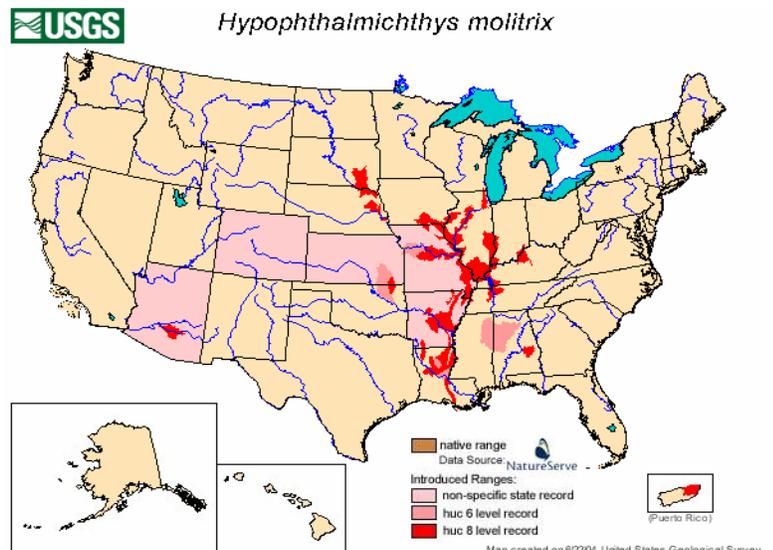
Silver carp may also be referred to as flying carp because of their tendency to jump from the water when disturbed.

**SCIENTIFIC NAME:** *Hypophthalmic molitrix*

Silver carp is in the family Cyprinidae, the minnow and carp family. The genus *Hypophthalmic* is made up of the Greek word “hypo” meaning “under”, the Greek word “ophthalmos” meaning “eye” and the Greek word “ichthys” meaning “fish”. The silver carp was first named by Valenciennes in 1844.

**DISTRIBUTION:** The silver carp’s native range includes the major Pacific drainages in eastern Asia from the Amur River in Russia to the Pearl River in China. Its current United States distribution includes Alabama, Arizona, Arkansas, Colorado, Hawaii, Illinois, Indiana, Kansas, Kentucky, Louisiana, Missouri, Nebraska, South Dakota, and Tennessee.

**Indiana:** In Indiana silver carp have been found in the Wabash River south of Lafayette, along



the Ohio River, and the West Fork of White River.

**DESCRIPTION:** The silver carp is a deep-bodied fish that is laterally compressed. They are a very silvery in color when young and when they get older they fade from a greenish color on the back to silver on the belly. They have very tiny scales on their body but the head and the opercles are scaleless. They have a large mouth without any teeth in the jaw, but they have pharyngeal teeth. Its eyes are situated far forward on the midline of the body and are slightly turned down. Silver carp can grow to over three feet in length and to nearly 100 pounds. As of 2004, the largest silver carp caught by an angler in Indiana weighed 15 pounds and 8 ounces. This species is very similar to another exotic Asian carp found in the United States, the bighead carp. The silver carp is fairly uniform in color whereas the bighead has irregular dark blotches on its back and sides. The silver carp has a sharply keeled belly from the anal fin to the throat, whereas the bighead carp has a keeled belly from approximately its pelvic fins to the anal fin.

**LIFE CYCLE BIOLOGY AND LIFE HISTORY:** Silver carp are filter feeders that eat phytoplankton, zooplankton, bacteria, detritus and they graze aquatic vegetation. They live in freshwaters that are standing or slow flowing. After 3 years they are mature enough to breed and will breed until their maximum age of 10 years old. Spawning occurs anytime between April and September when the temperature is between 18-20 degrees Celsius. They migrate up stream to breed in groups of 15 to 20. They need water with some current so the eggs and larvae can float downstream. The silver carp swim just below the waters surface and are often disturbed by boat motors and will jump from the water when startled. These “flying fish” can pose a danger to anglers, boaters, and other recreational users. Silver carp have been cultured around the world, and in many countries are relied on heavily as a food source.



A silver carp, startled by the boat, leaps more than six feet out of the Illinois River.  
(Illinois Natural History Survey)

**PATHWAYS/HISTORY:** First introduced into the United States in 1973, a fish farmer used silver carp in his Arkansas ponds to control the level of phytoplankton. By the end of the 1970's some state, federal and private aquaculture facilities as well as sewage lagoons had been stocked with silver carp. It did not take long for silver carp to be detected in natural waters with reports being received as early as 1980. Silver carp are

now present throughout much of the Mississippi River basin and in other watersheds in Alabama and Arizona.

**DISPERSAL/SPREAD:** The silver carp was purposely introduced into farm ponds to control phytoplankton as well as to provide a food fish. It was soon stocked in other facilities that included sewage lagoons. It is believed that the silver carp found in natural waters are escapees from aquaculture facilities. Some are also thought to have entered our water as contaminant fish in grass carp stocks. Populations in Hawaii and in Colorado were intentionally released.

**RISKS/IMPACTS:** When the silver carp's population numbers become large enough, they have the ability to cause damage to native species due to the fact that they feed on phytoplankton. This results in competition with larval fish, mussels and some adult fish that rely on phytoplankton for food. Native species such as paddlefish, gizzard shad and bigmouth buffalo will be affected if silver carp become established in their waters. Silver carp will jump from the water when disturbed which causes a hazard to water recreational users. There have been reports of boaters being injured, some seriously due to the jumping silver carp. Also, this new species could bring with it diseases that our native fish cannot survive.

**MANAGEMENT/PREVENTION:** To reduce the spread of silver carp the U.S. Fish and Wildlife Service has proposed including the species on the federal list of injurious species. This would prohibit silver carp imports as well as interstate transport without proper permits. The fear that these fish could make their way into the Great Lakes and interrupt the \$4 billion fishing industry has prompted the U.S. Army Corps of Engineers and the state of Illinois to build an electric barrier in the Chicago Sanitary and Ship Canal to stop the carp from moving from the Mississippi River watershed into the Great Lakes watershed. Indiana prohibits the importation, possession, or release of silver carp into public or private waters. If a silver carp is caught in Indiana, it must be killed immediately and not returned to the water. An aquaculture permit may be provided for medical, educational or scientific research purposes.

Since silver carp appear to be well established in Indiana's large rivers, the main management objective at this time is preventing them from invading other bodies of water. There are a few things that you can do to help stop the spread of silver carp and other invasive fish species.

- ✓ Learn how to correctly identify silver carp and other similar invasives.
- ✓ If fishing with bait you collect yourself, consider using baitfish from the water where you are fishing.
- ✓ Dispose of unused bait on land or in the trash, never in water.
- ✓ Always drain water from your boat, livewell and bilge before leaving the access area.

- ✓ Never transfer fish from one body of water to another.
- ✓ Immediately kill all silver carp and other Asian carp that are caught.
- ✓ Immediately report new locations of silver carp or other Asian carp to the Indiana Department of Natural Resources, Division of Fish and Wildlife. Photographs may be beneficial for identity verification.
  - (317)232-4080
  - [dkeller@dnr.IN.gov](mailto:dkeller@dnr.IN.gov)
  - 402 W. Washington St., Rm W273  
Indianapolis, IN 46204

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