

Asian Carp

FACT SHEET

Pennsylvania Sea Grant, as part of the National Sea Grant Program, promotes efforts to improve the environmental and economic health of Pennsylvania's coastlines.

Focusing on the Lake Erie and Delaware River watersheds, Pennsylvania Sea Grant works to increase public awareness of coastal environmental and economic issues through extension, communication, applied research, and education activities.

The National Oceanic and Atmospheric Administration (NOAA) administers the National Sea Grant College Program. Pennsylvania Sea Grant is also supported by the Pennsylvania State University and the Commonwealth of Pennsylvania.

Pennsylvania Sea Grant
Penn State Erie
5091 Station Road
Erie, PA 16563
Tel. 814-898-6420
Fax 814-898-6462

Delaware Estuary Office
1450 Edgmont Avenue
Suite 150
Chester, PA 19013-3934
Tel. 215-806-0894
Fax 501-637-2923

Background Two species of Asian Carp, the bighead carp (*Hypophthalmichthys nobilis*) and silver carp (*Hypophthalmichthys molitrix*), pose a significant threat to the Great Lakes because of their size, fecundity, and ability to consume large amounts of food. They are well-suited to the cold water climate of the Great Lakes region, which is similar to their native Eastern Hemisphere habitats. It is expected that they would compete for food with the valuable sport and commercial fish. If they entered the system, they would likely become a dominant species in the Great Lakes. Asian carp are large 39-40 in. (40-50 lb.) fish introduced into the United States from southern and central China, by fish farmers in southern states in the 1960s and 70s to control vegetation and algae blooms. The bighead and silver carp escaped into the Mississippi River from southern aquaculture facilities in the early 1990s when the facilities were flooded. Steadily, the carp have made their way northward, becoming the most abundant species in some areas of the Mississippi, out-competing native fish, and causing severe hardship to the people who fish the river. Currently, the carp are in the Chicago Ship and Sanitary Canal, which connects the Mississippi River to the Great Lakes, and they have been sighted approximately 40 miles south of Lake Michigan.

Bighead Carp

The bighead carp is a very large deep-bodied, somewhat laterally compressed fish with a very large head (Figure 1). Scales are very tiny,



Figure 1. Bighead Carp: Image courtesy of the USGS NAS Web site: <http://nas.er.usgs.gov/queries/SpFactSheet.asp?speciesID=551>

resembling those of trout, and the eyes are situated below the midline of the body. Gill rakers are long, comb-like, and close-set allowing the species to successfully strain plankton from the water. The bighead carp utilizes open water areas, moving about in the surface zones of large lowland rivers, consuming large quantities of plankton, and aquatic insect larvae and adults. Bighead carp first began to appear in open public waters in the early 1980s. These species have now been recorded from within, or along the borders

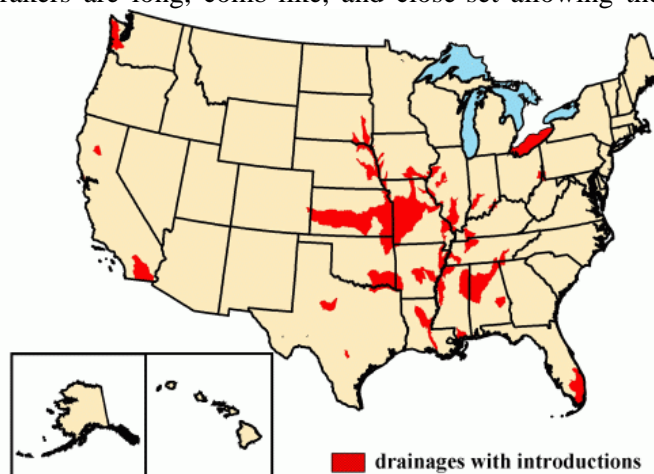


Figure 2. 2003 Bighead Carp Distribution: Image courtesy of USGS NAS Web site: <http://nas.er.usgs.gov/queries/SpFactSheet.asp?speciesID=551>

of at least 18 states (Figure 2), and is reported to be “piling up” in large numbers below dams, and filling the nets of commercial fisherman to the point that the nets cannot be lifted.

Silver Carp This deep-bodied, laterally compressed, very large minnow is similar to the bighead carp, but much more efficient at straining suspended material from the water through use of gill rakers that are fused



Figure 3. Silver Carp: Image courtesy of The Virtual Aquarium
Web site:
<http://www.cnr.vt.edu/efish/families/silvercarp.html>

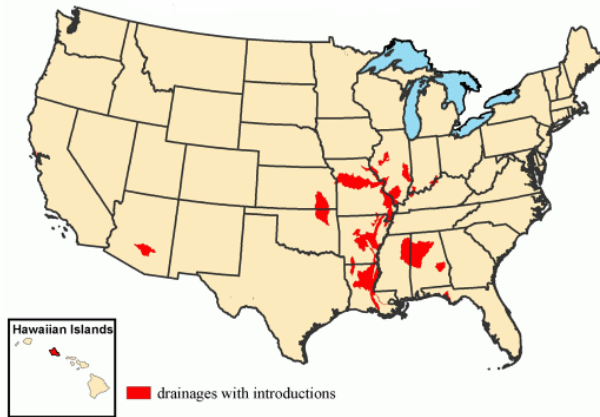


Figure 4. 2003 Silver Carp Distribution: Image courtesy of the
USGS NAS Web site:
<http://nas.er.usgs.gov/queries/SpFactSheet.asp?speciesID=549>

into sponge-like porous plates (Figure 3). The silver carp is currently spreading rapidly throughout the large rivers of the Mississippi River Basin, with huge numbers and significant natural reproduction being documented in off-channel and backwater habitats (Figure 4).

Impact The impact of these species in the United States is not entirely known. Because bighead and silver carp are planktivorous and attain a large size, it is suggested that these carp have the potential to deplete plankton populations. A decline in the availability of plankton can lead to reductions in populations of native species that rely on plankton for food, including all larval fishes, some adult fishes, and native mussels. Once out-competing native fishes and becoming the dominant species, the Asian carp would adversely affect commercial and sport fishing. Also, these species have the ability to jump 6 to 10 feet out of the water. The fish are excited by the wake of fast moving boats causing the carp to jump. A woman operating a personal watercraft in the Illinois River was recently struck by a jumping Asian carp, knocked unconscious, and nearly drowned before being rescued.

How to stop the spread Use of juveniles as bait and release of adults into new habitats contribute to their spread. Early detection of isolated populations may help slow or restrict the spread of these Asian carp. You can do the following to prevent the spread of the bighead and silver carp:

- ✓ Learn to identify the bighead and silver carp
- ✓ Dispose of bait properly: Do not release bait into the water
- ✓ Always drain water from your boat, livewell, and bilge before leaving any water access
- ✓ Never dip your bait bucket into a lake or river if it contains water from another water source
- ✓ Never dump live fish from one body of water into another body of water
- ✓ Report new sightings – note exact location; freeze specimen in a sealed plastic bag; and call Pennsylvania Sea Grant, Penn State Erie (814-898-6420), or the Pennsylvania Fish and Boat Commission, Lake Erie Research Unit in Erie (814-474-1515).

Information for this fact sheet was adapted from a variety of sources, including:

Great Lakes Fishery Commission Fisheries Management Web site: <http://www.glfsc.org/fishmgmt/carp.asp>

USGS Nonindigenous Aquatic Species Web site: <http://nas.er.usgs.gov/queries>