

# Asian Carp Movement in the Illinois River 1990 - Present



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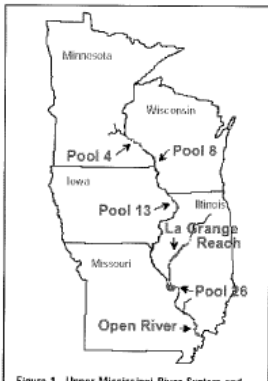
Project Status Reports

PSR 2000-05 November 2000

## Asian Carp Invasion of the Upper Mississippi River System

by Todd M. Koel, Kevin S. Irons, and Eric Ratcliff

Five species of Asian carp now occur in the contiguous United States. These include grass carp (*Ctenopharyngodon idella*), common carp (*Cyprinus carpio*), silver carp (*Hypophthalmichthys molitrix*), bighead carp (*H. nobilis*) and black carp (*Mylopharyngodon piceus*). Common carp, brought to the United States from Europe in 1831, were soon propagated and distributed throughout waters of the Upper Mississippi River System (UMRS). Grass carp were imported from eastern Asia in 1963 to control submersed aquatic vegetation in aquaculture ponds and were first documented in the Mississippi River along Illinois in 1971. Silver carp and bighead carp were imported from China in 1973 to improve water quality of aquaculture ponds (initially in Arkansas). These species have invaded our Midwestern rivers, through pond escapement or by deliberate introductions and were first documented in the UMRS as early as 1982. Reproducing populations of these four species are now present in the UMRS. Presently black carp, which are mollusk eaters, only exist in aquaculture ponds of Arkansas and Mississippi.



**LTRMP documents the spread of Asian Carp**  
Since initiating fish community sampling in 1990, the Long Term Resource Monitoring Program (LTRMP) has been collecting Asian carp from multiple aquatic habitats of six reaches of the UMRS (Figure 1) and documenting changes in abundance and size structure of these potentially harmful fishes. Common carp were

FIGURE 1. Upper Mississippi River System and

2010

## Aquatic Invasive Species Risk Assessment for the Chicago Sanitary and Ship Canal

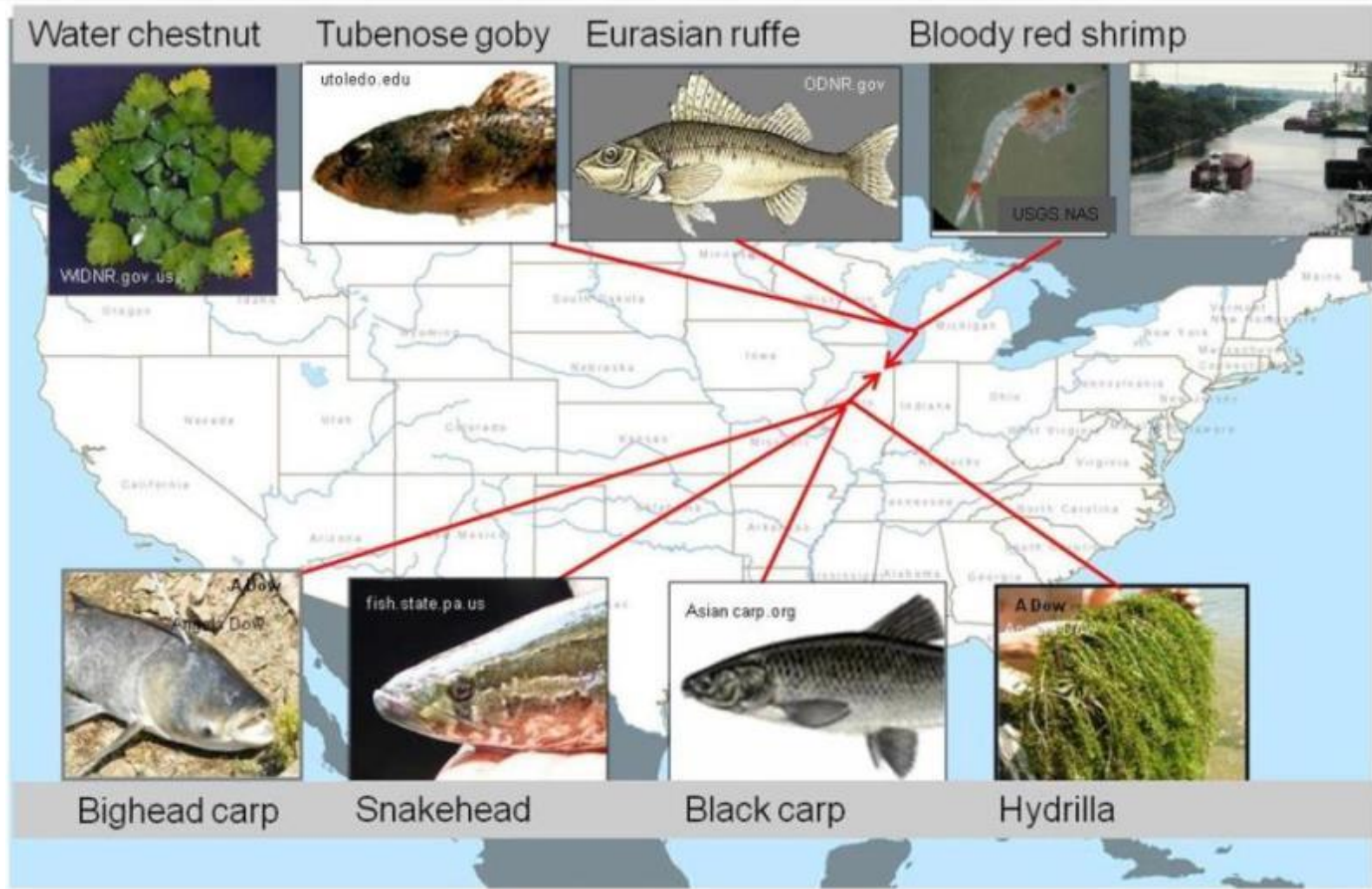
Christopher L. Jerde, Matthew A. Barnes, Joanna McNulty, Andrew R. Mahon, W. Lindsay Chadderton, and David M. Lodge



CENTER FOR AQUATIC CONSERVATION

Center for Aquatic Conservation, University of Notre Dame, P.O. Box 369, Notre Dame, Indiana 46556-0369

# 29 species Poised to Invade Mississippi Via Canal



# 10 Species Currently Poised to Invade Great Lakes Via Canal



Asian carp captured as part of USGS monitoring 1990 – 2000 on Upper Mississippi and Lower Illinois Rivers  
 (Koel, et al, 2000)

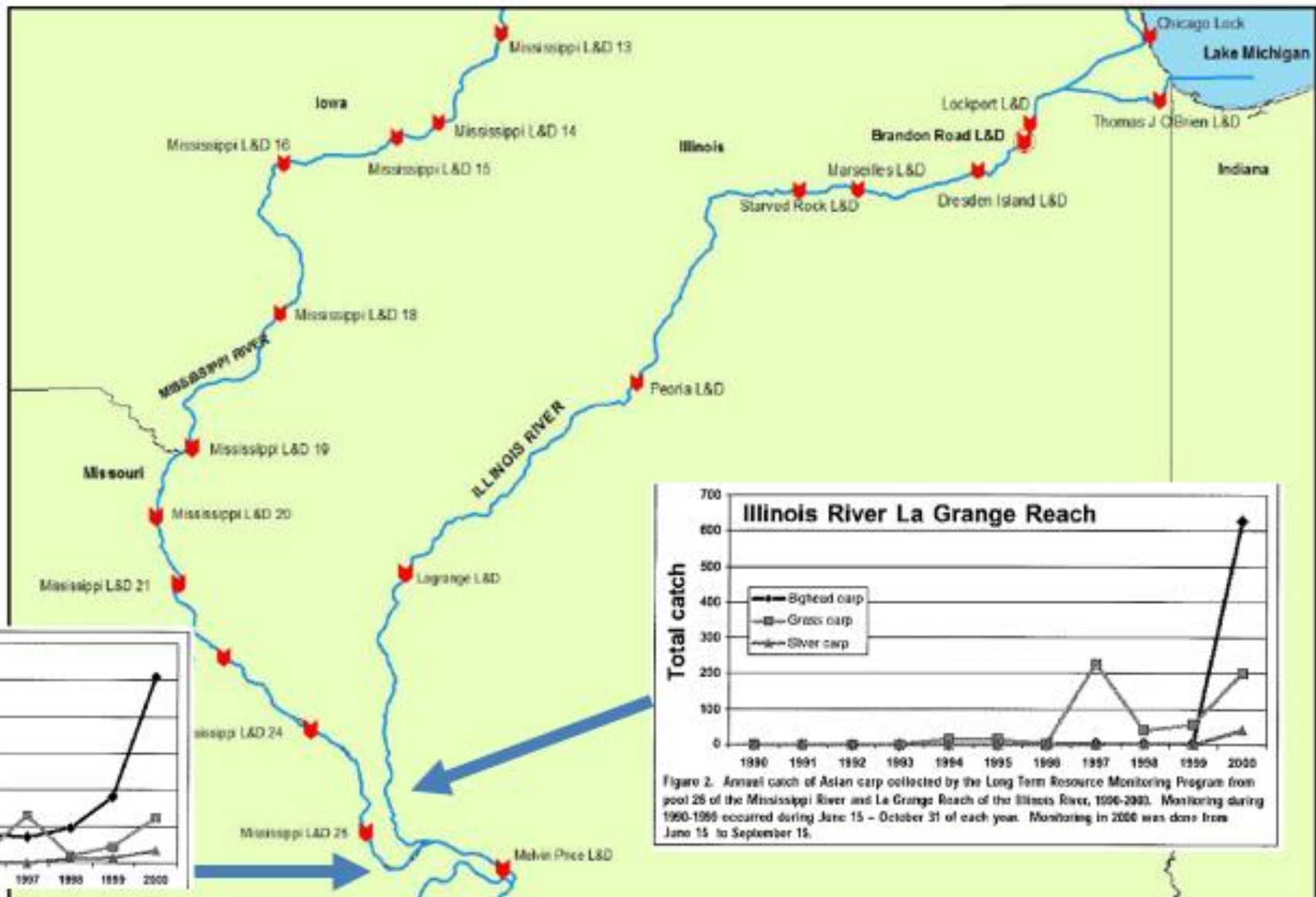
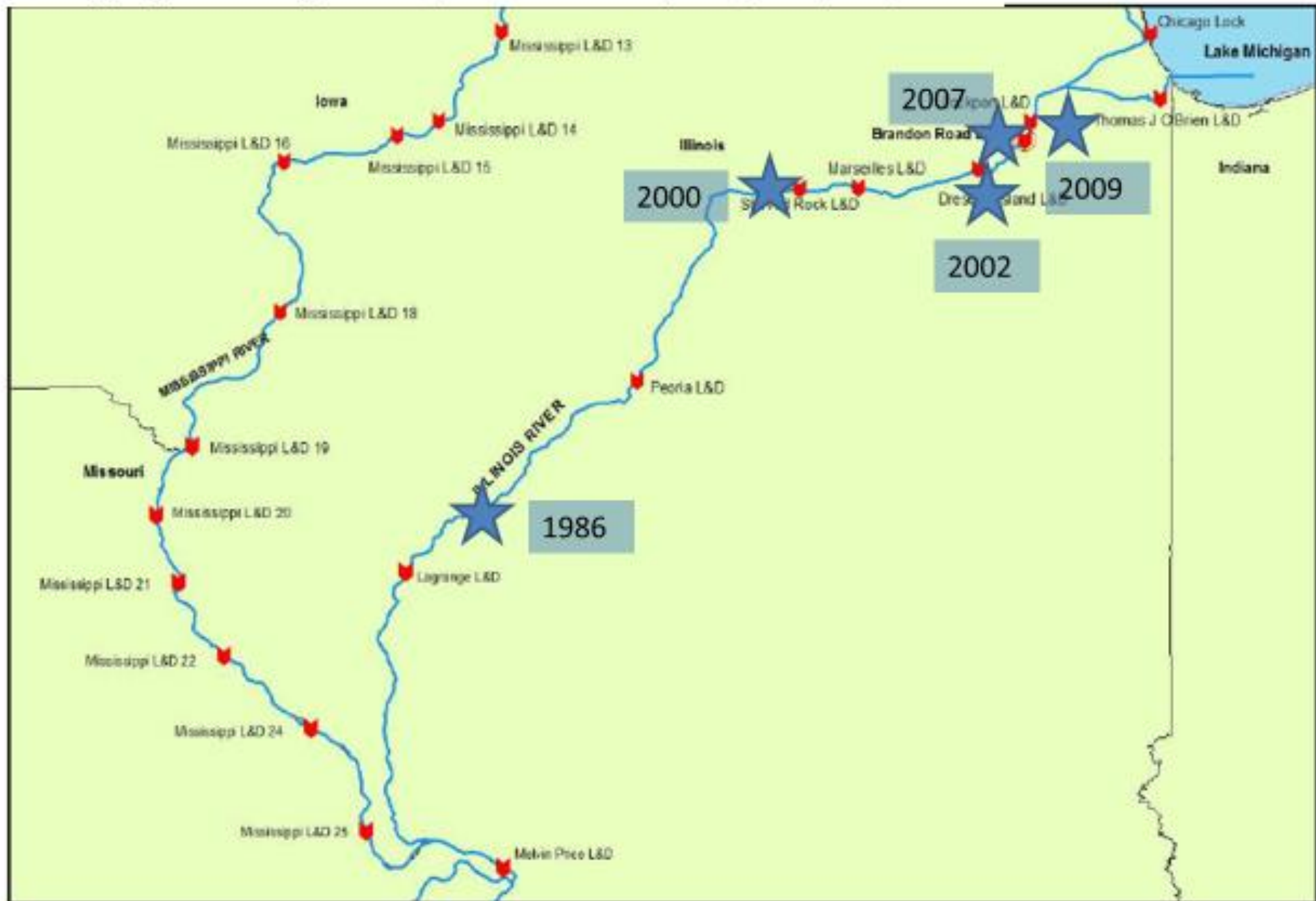
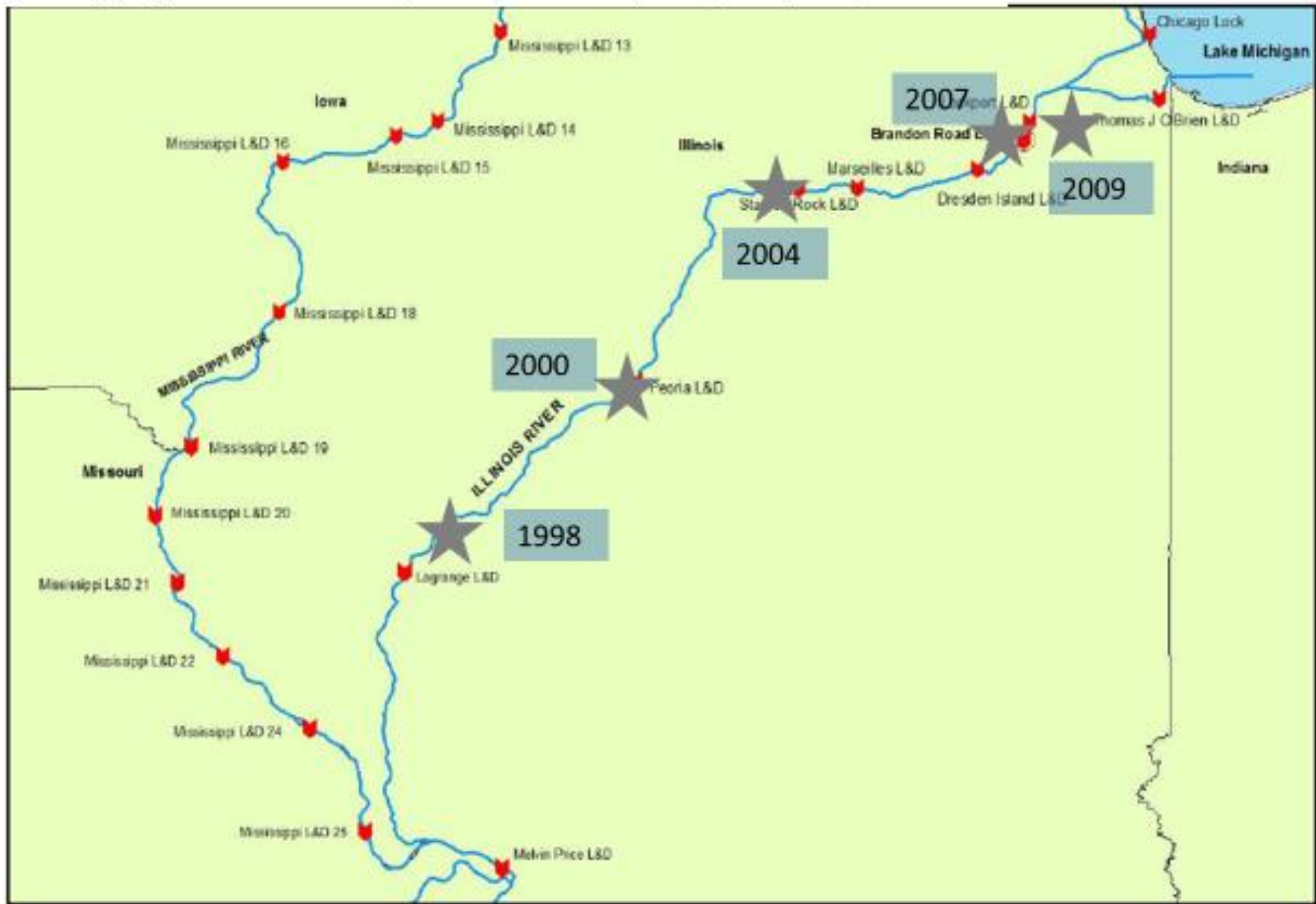


Figure 2. Annual catch of Asian carp collected by the Long Term Resource Monitoring Program from pool 26 of the Mississippi River and La Grange Reach of the Illinois River, 1990-2000. Monitoring during 1990-1996 occurred during June 15 - October 31 of each year. Monitoring in 2000 was done from June 15 to September 15.

Leading edge of the Bighead carp detection front (Jerde, et al, 2010)



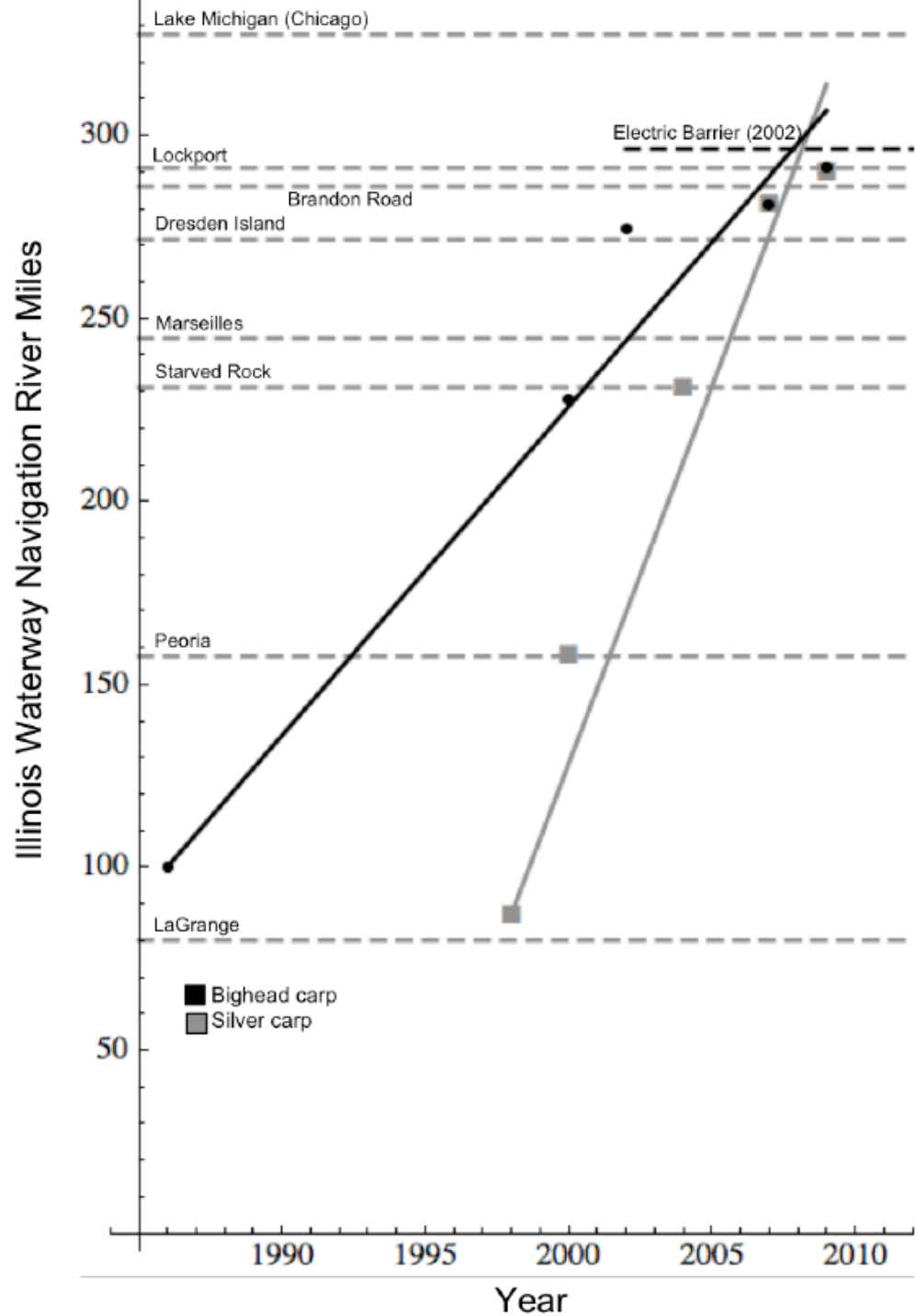
Leading edge of the Silver carp detection front (Jerde, et al, 2010)



Detection Leading Edge  
Advance:

Bighead 9 river miles/year  
Silver 21 river miles/year

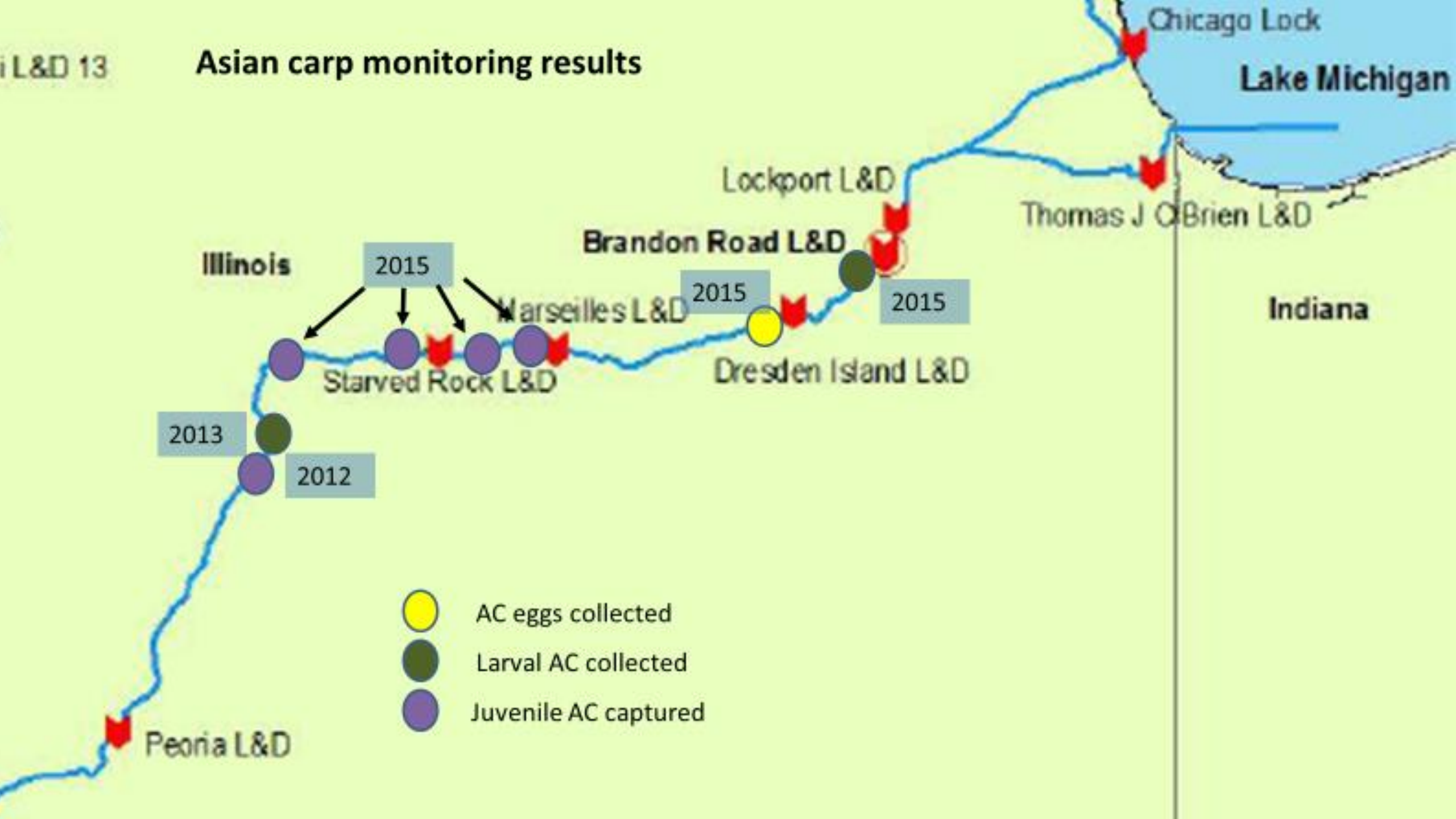
Jerde, et al, 2010







# Asian carp monitoring results



Illinois

2015

Brandon Road L&D

2015

Marseilles L&D

2015

Starved Rock L&D

Dresden Island L&D

2013

2012

Indiana



AC eggs collected

Larval AC collected

Juvenile AC captured

Peoria L&D

Chicago Lock

Lake Michigan

Thomas J O'Brien L&D



