

Burbot (*Lota lota*)

KSNPC Special Concern

- 10 records from Kentucky; recent records from lower Ohio River (Livingston, McCracken, Marshall, Ballard counties)
- Usually found over gravel/sand/cobble in big rivers



Image - Shedd Aquarium

Black Buffalo – Ohio River

- Irregularly occurring in KY portion of Ohio River
- Preferred habitat is backwaters, oxbows, and pools
- Appears to have declined since 1950



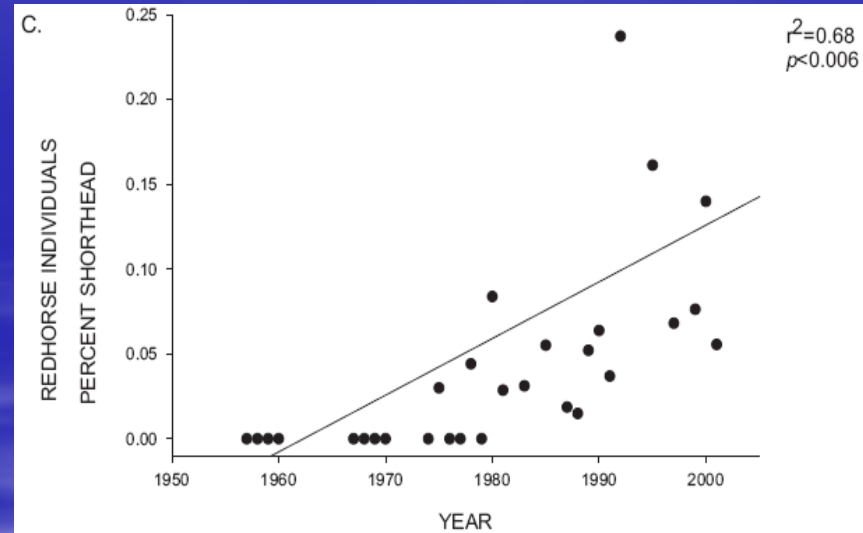
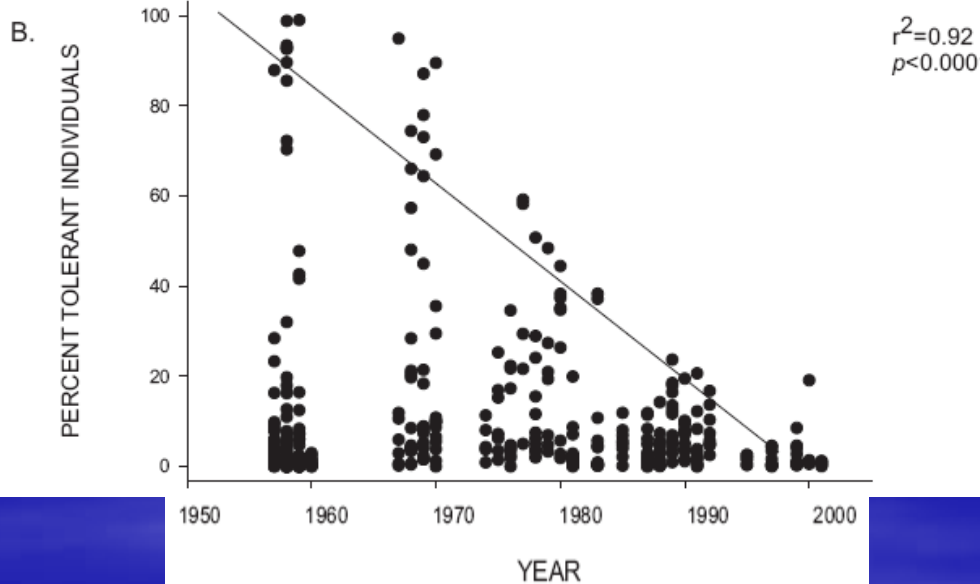
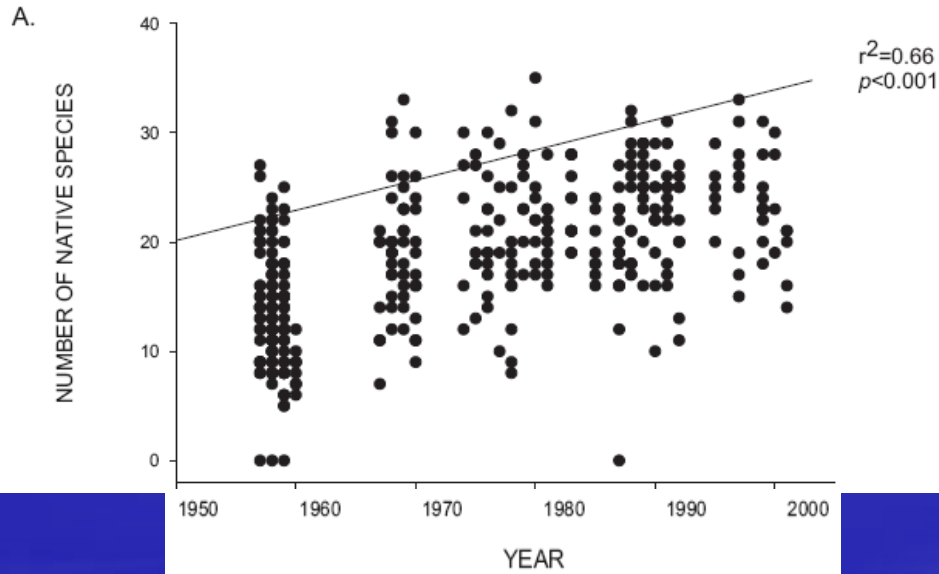
Drawing: Texas Parks and Wildlife
(ain't it a beaut)

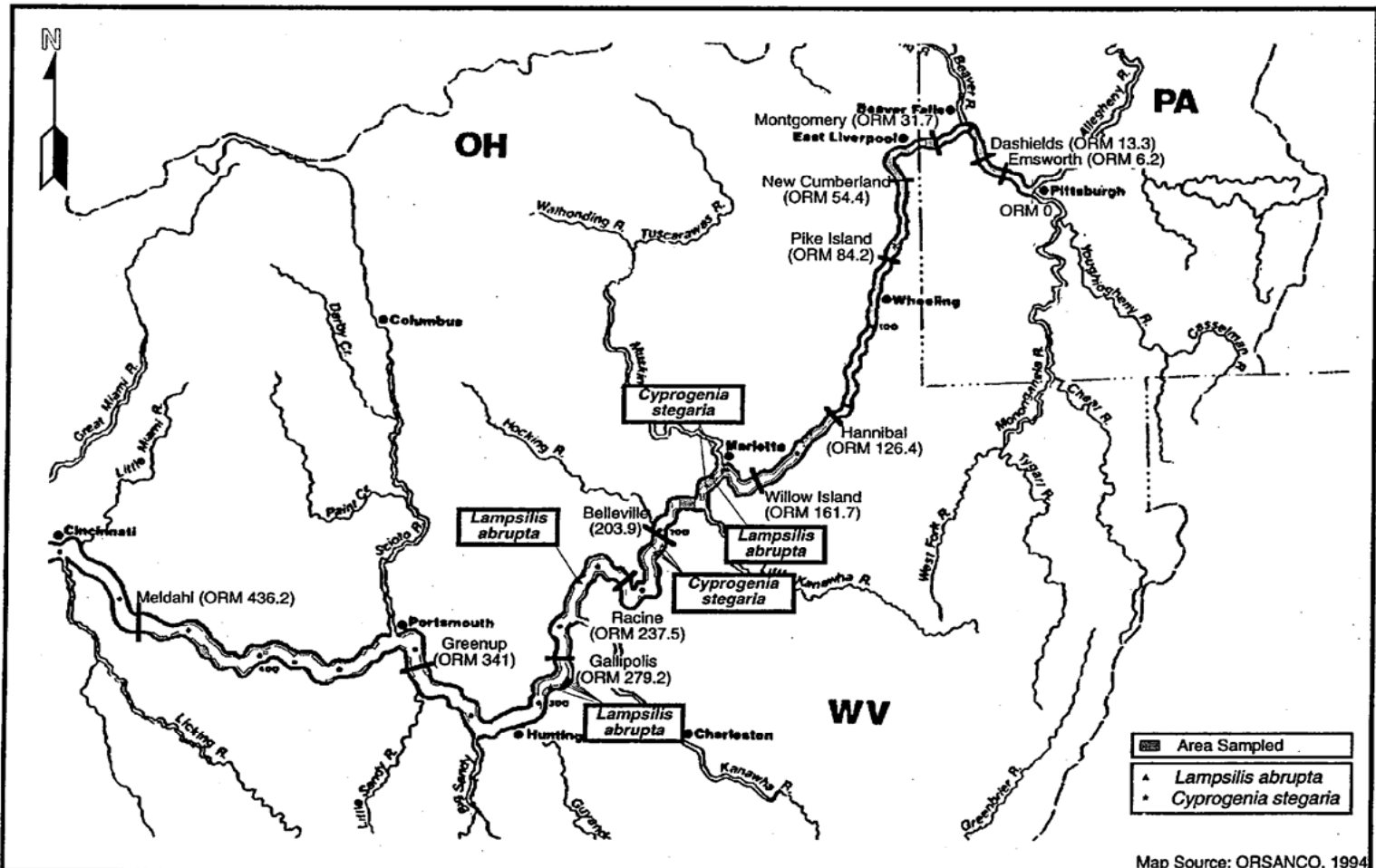


Improvements in Water Quality in Ohio River

- Lorentz *et al* (2006) reported an increase from 32 to 60 species between 1982-1986 and 2001-2005, including increases in % intolerant taxa and increase in % redhorse (intolerant suckers) in monitoring at Zimmer power plant, Moscow, Ohio (ORM 444).

Thomas *et al.* (2004) – Ohio R lock studies from 1950s - 2000





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Figure 3-2. Distribution of extant federally endangered species in the upper Ohio River.

ESI

Recruitment trends of mussels in upper Ohio River

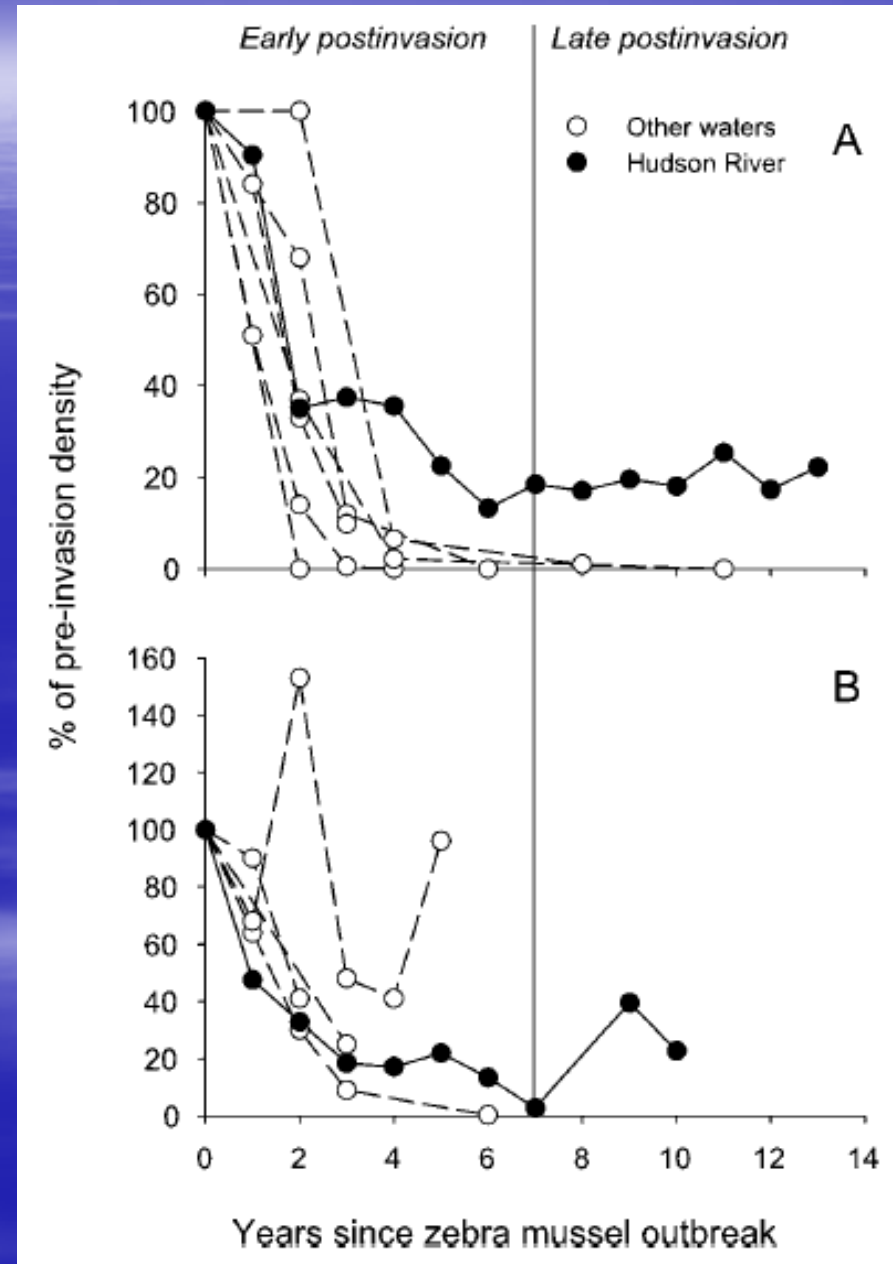
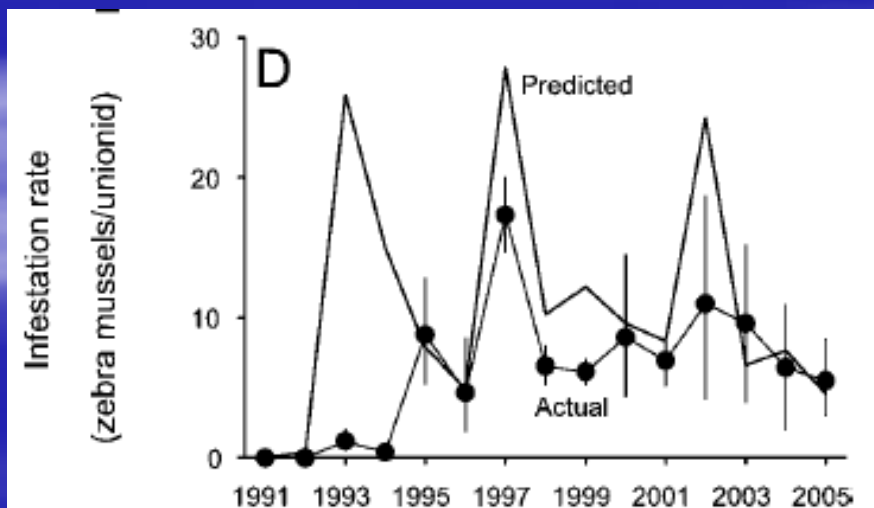
- New Cumberland (RM 32-36) – no data
- Pike Island (55-78) - no data
- Hannibal (89-97) - no data
- Willow Island (128-158) - low
- Belleville (162-193) - low to moderate
- Racine (204-235) - low
- Gallipolis (238-278) - low to moderate
- Greenup (282-332) - low to moderate, abund @ RM 292
- Meldahl (341-431) - low to moderate

Recent trends in mussel data from lower Ohio River

- 2003 dive data from ORM 923-924 located 18 mussel species of almost 700 individuals
- 3 individuals of *Potamilus capax* (fat pocketbook)
- Bed estimated at 2.3 mussels per square meter

Potential Future Trends ? – Zebra Mussels

Data: Strayer, D.L., and H.M. Malcom. 2007. *Journal of the North American Benthological Society* 26 (1): 111-122.



Important considerations for rare aquatic species

- Flow management and timing of water releases; Miller and Payne (2000) found successful classes of *F. ebena* (ebonyshell) following high flows and then rapid flow drops in spring.
- Avoidance of dredging in areas with sensitive mussel habitats, especially near islands
- Management of significant sediment issues