

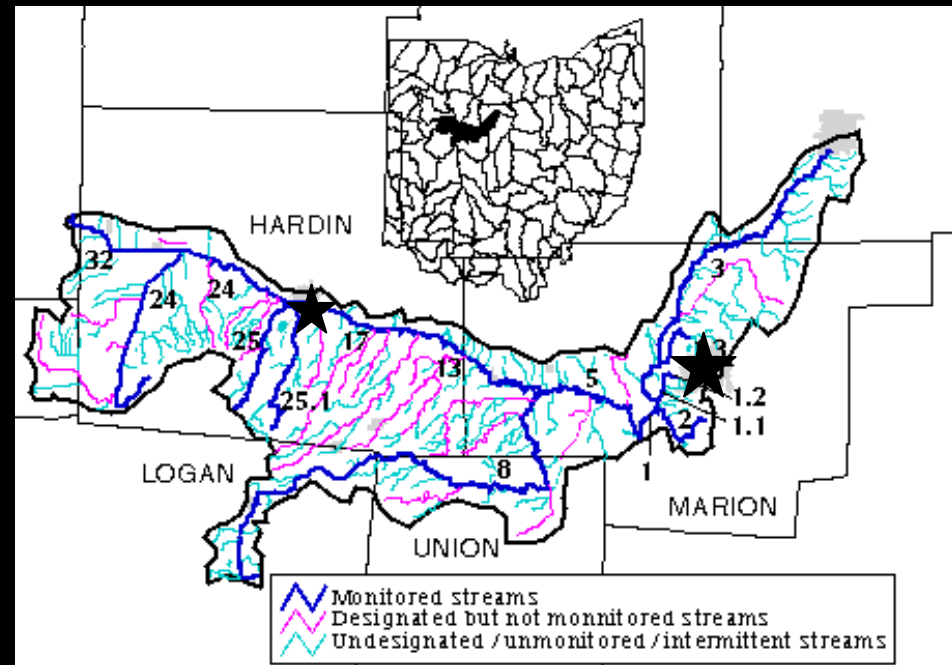
The Upper Scioto Watershed



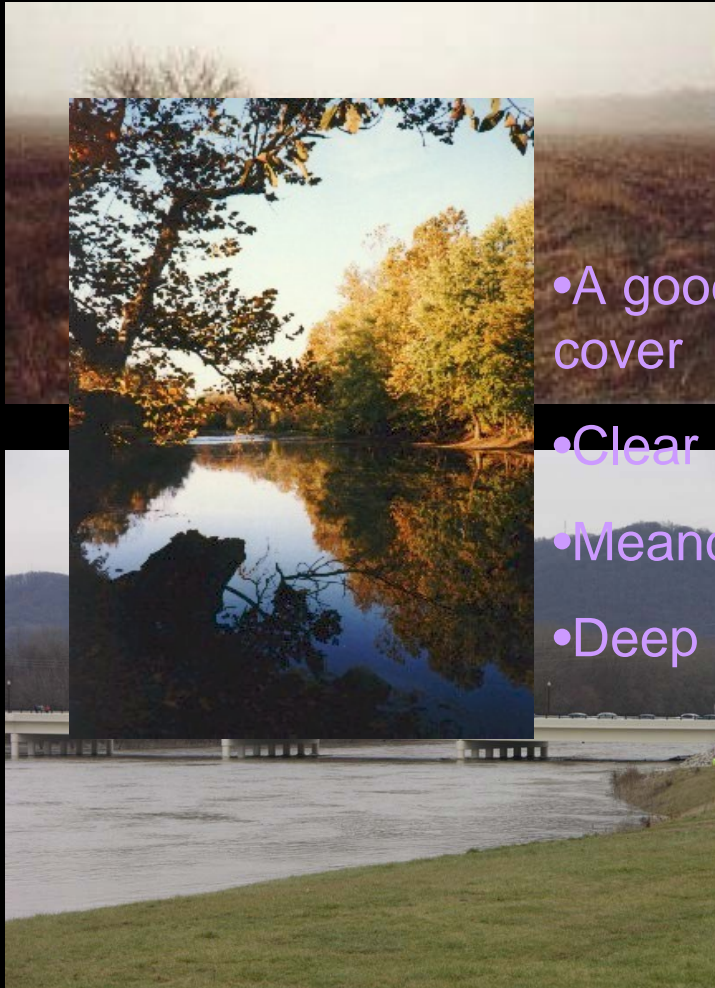
By: Kassie Stewart, Robin Smith, and
Karissa Schroeter

Introduction to the Upper Scioto Watershed

- The Upper Scioto watershed is mostly used for row crops, and pastures for cattle.
- The major problems in the watershed are:
 - Nutrient enrichment
 - Habitat alterations
 - Metals
 - Ammonia
- The two most populated areas are Marion and Kenton.
- The main streams are
 - Scioto River
 - Little Scioto



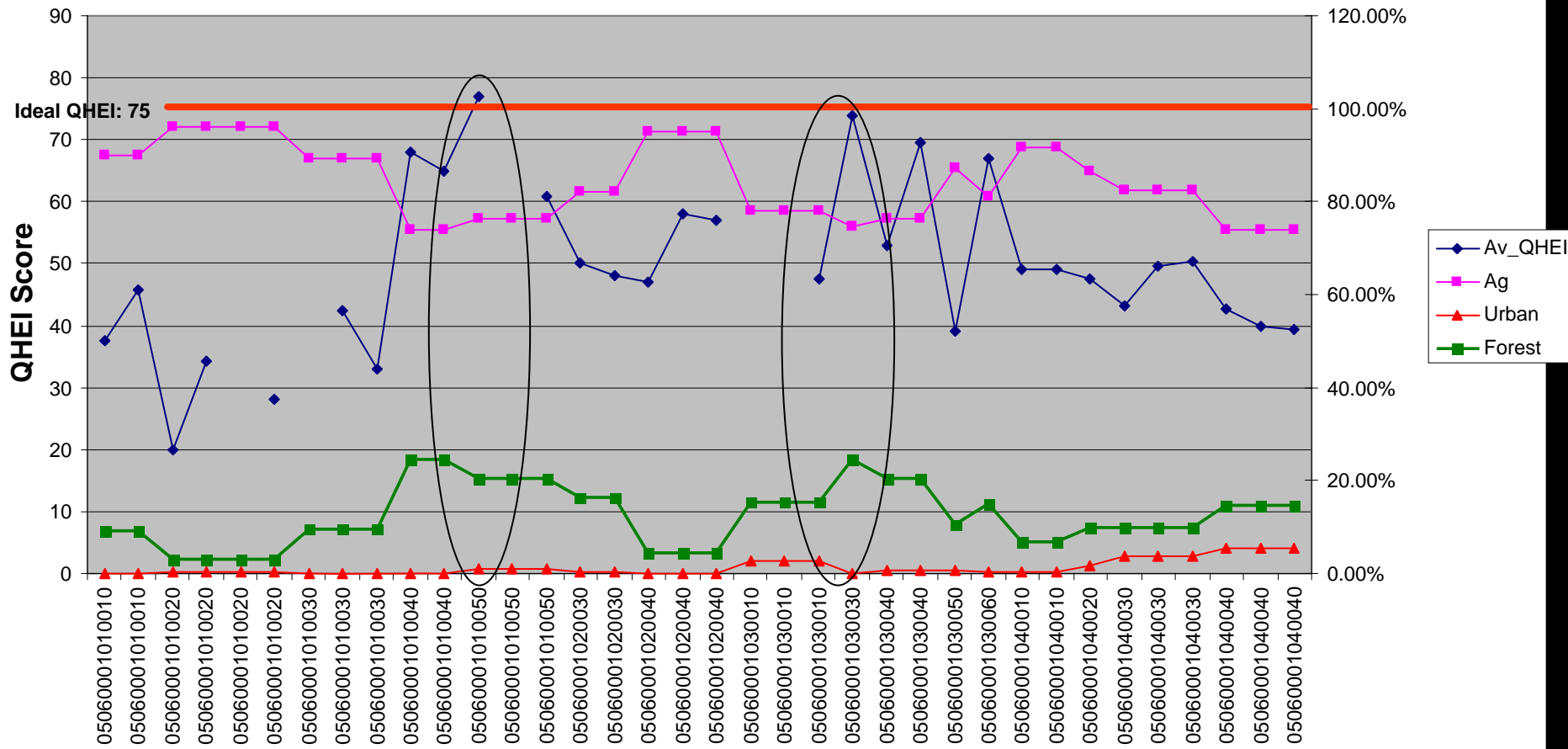
What happens when there is too much agricultural and urban growth in the riparian zone?



- Channelized stream
- No cover
- Eroded banks
- A good riparian zone with lots of cover
 - In a field fertilizer could run off into the stream
- Clear stream
- Meander
- Deep pool
- Not much cover
- Eroded banks
- Lots of sediment in the stream

If the majority of land use in the riparian zone is agricultural or urban, the QHEI score will decrease.

Average QHEI and Land Use



My hypothesis was supported.

A good riparian zone, such as a forest = a better habitat (QHEI)

A good habitat = A high diversity of fish and macroinvertebrates

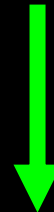
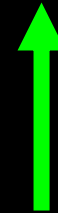


Karissa's Hypothesis

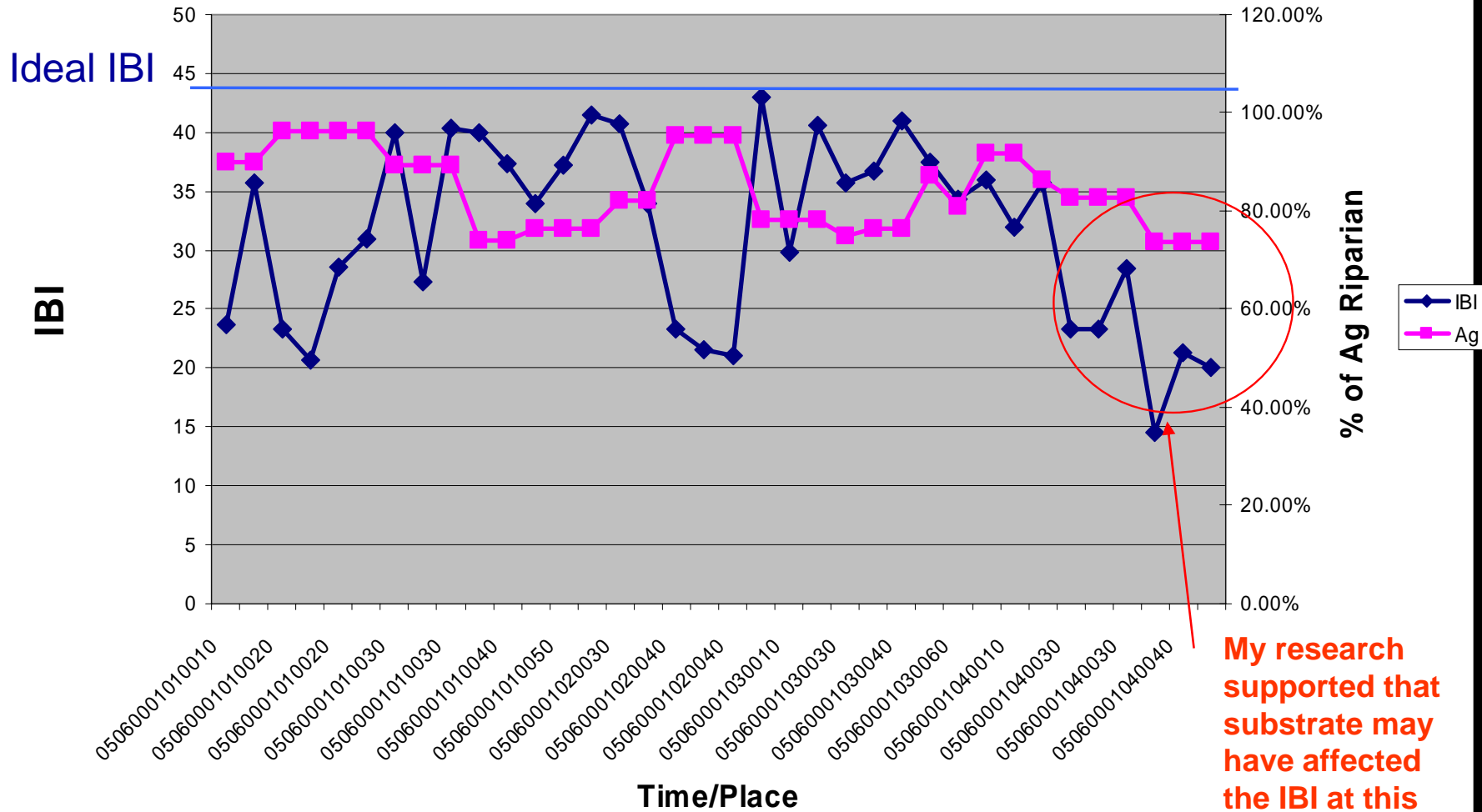
As agricultural land in the riparian zone increases, fish diversity (IBI) decreases.

Why?

- Channelization (no meanders & unwanted erosion)
- Fertilizer/pesticide runoff
- Animal wastes
- Cover removed

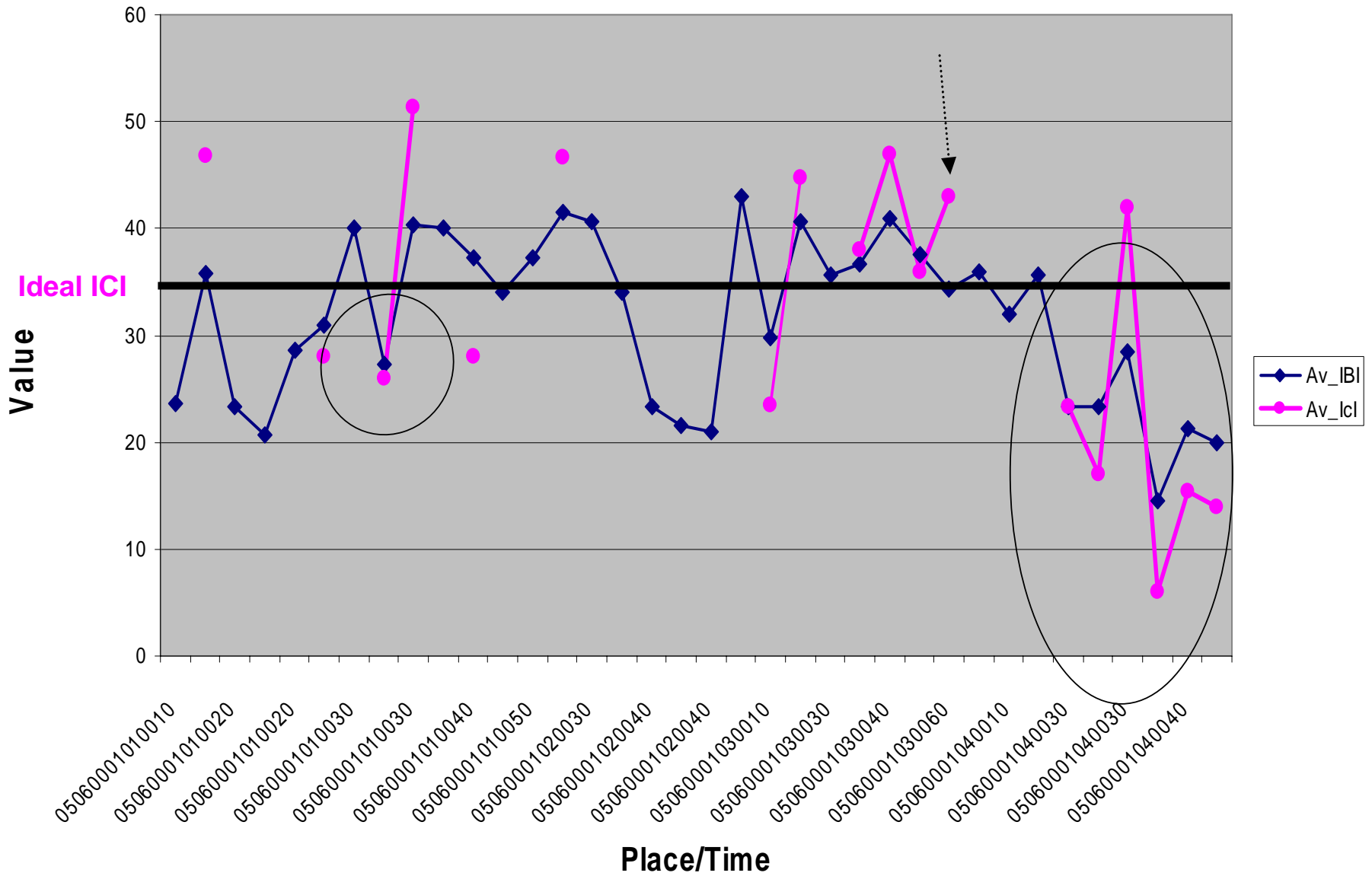


Agricultural Land Use and IBI



My research supported that substrate may have affected the IBI at this point.

IBI and ICI



Kassie's Conclusion

Some ICI data unknown but:

- Hypothesis supported
- Most IBI scores were low
- There are reasons why the ICI and IBI numbers are below average.
 - Substrate
 - Cover in the riparian zone



Mayfly

Prevention

Watershed Quality CAN be improved with your help!

- Have your water tested
- No till farming
- Rotate crops
- Observe & educate
- Be conscious of pollution
- Recycle
- Restore the riparian zone



We only have a little bit of the Earth's water available to us- shouldn't we try to preserve it instead of pollute it?



Are there any questions?