

Contaminants and Potential Effects on the Reproductive Physiology of White Sturgeon from the Columbia River

Gene Foster, ODEQ

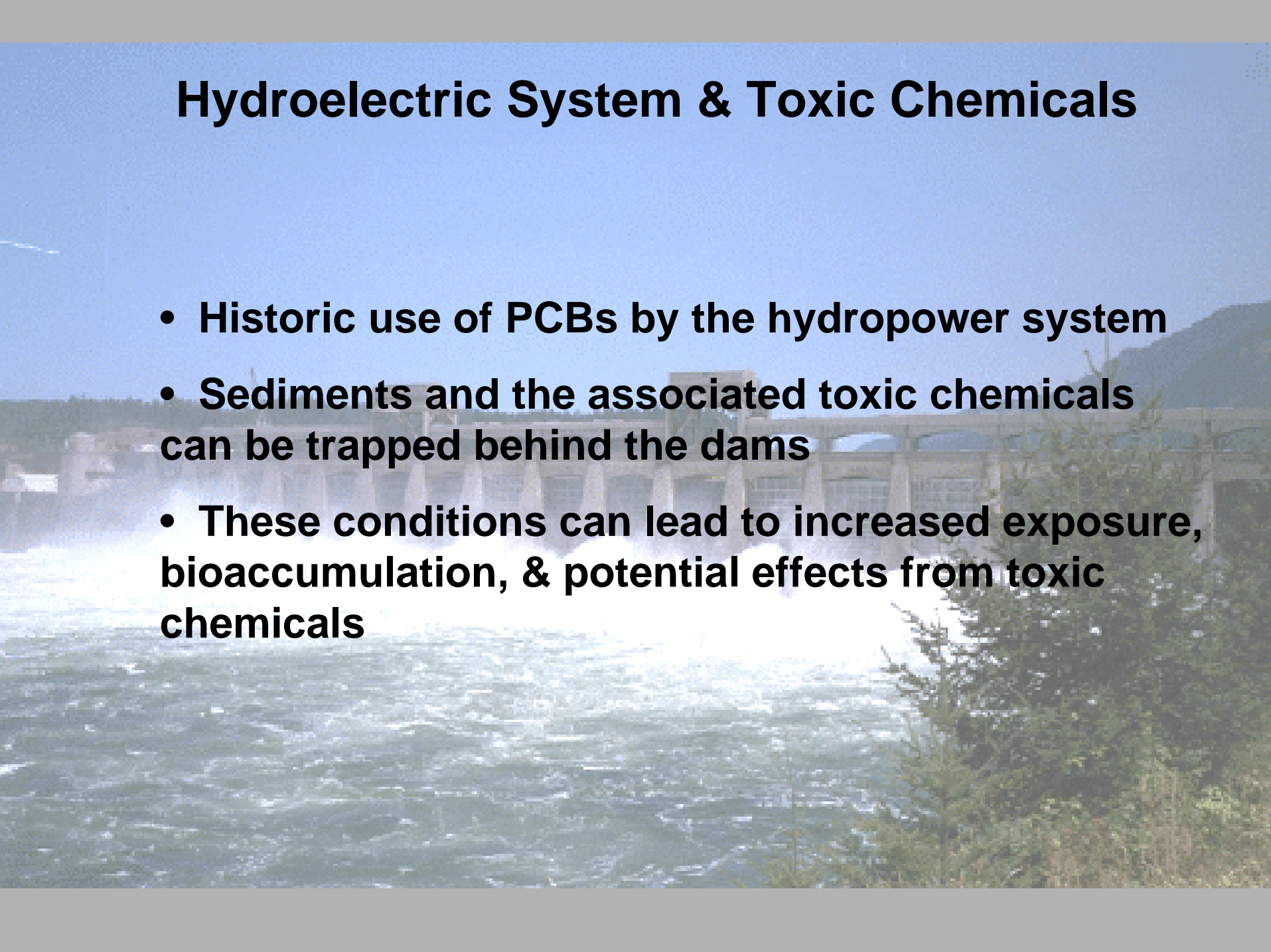
Oregon State University

Pacific University

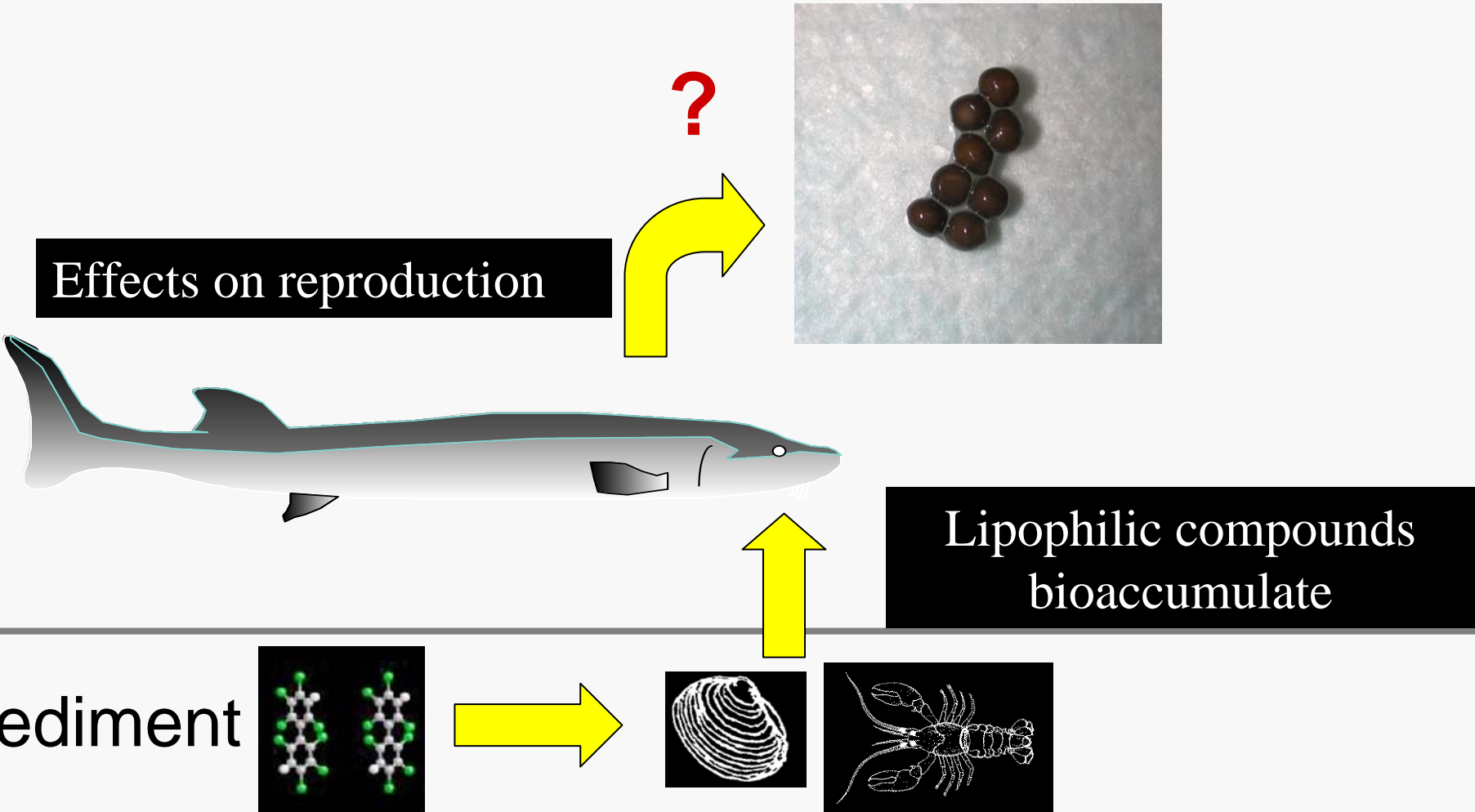
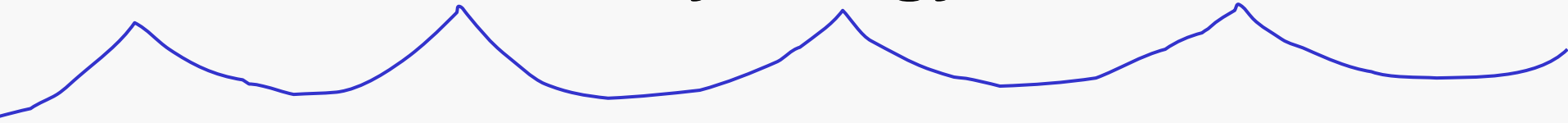
US Geological Survey-BRD

Hydroelectric System & Toxic Chemicals

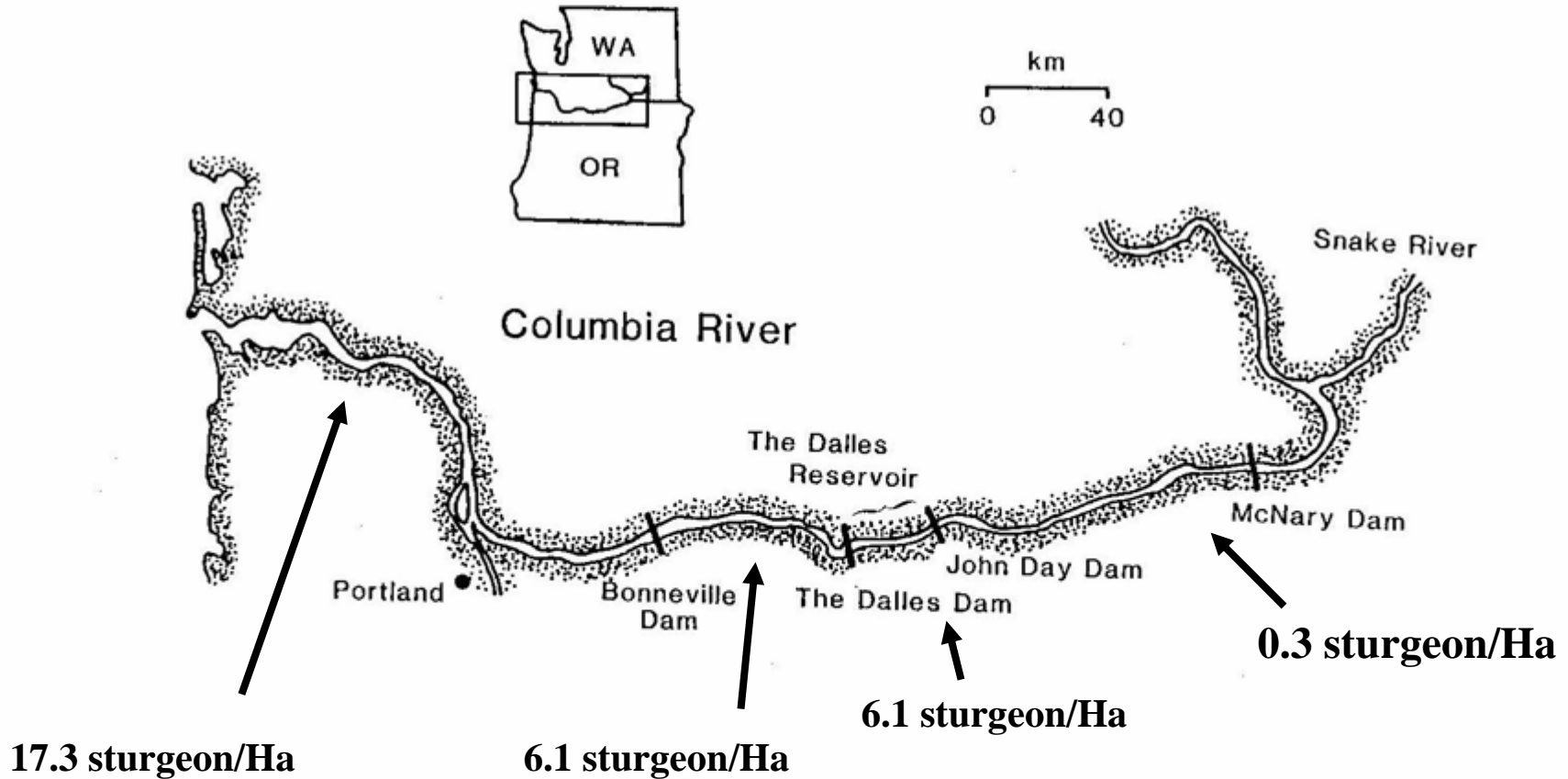
- **Historic use of PCBs by the hydropower system**
- **Sediments and the associated toxic chemicals can be trapped behind the dams**
- **These conditions can lead to increased exposure, bioaccumulation, & potential effects from toxic chemicals**



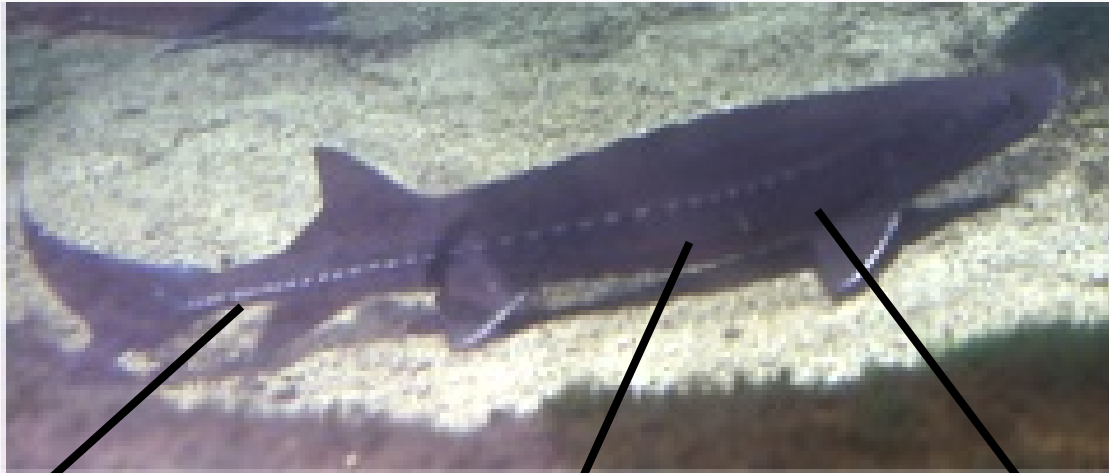
Contaminant Effects on Reproductive Physiology



White Sturgeon Production in the Columbia River



Tissues Sampled & Analysis



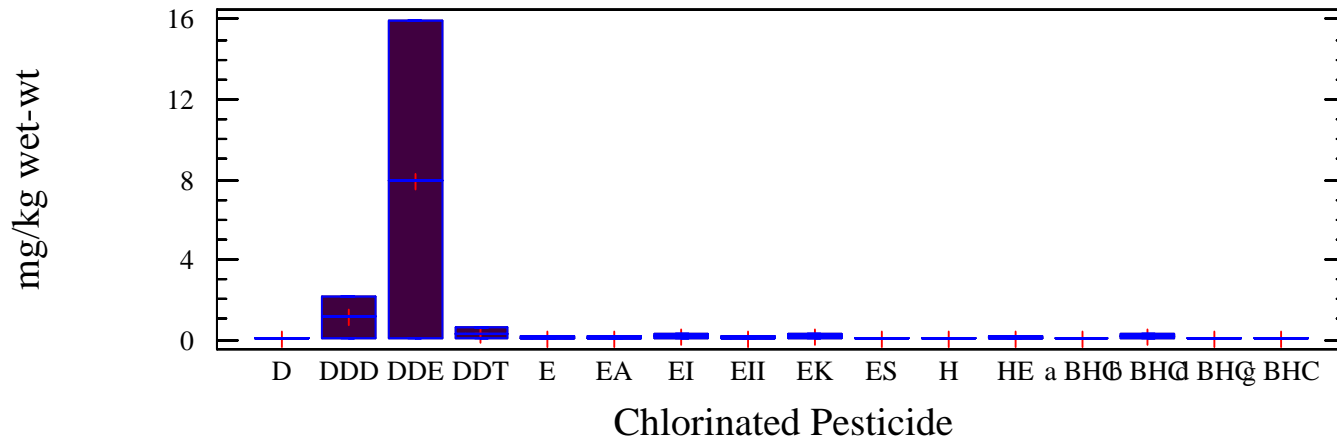
Blood Plasma
Steroids, Vtg, TAG

Gonad
OCs, histology

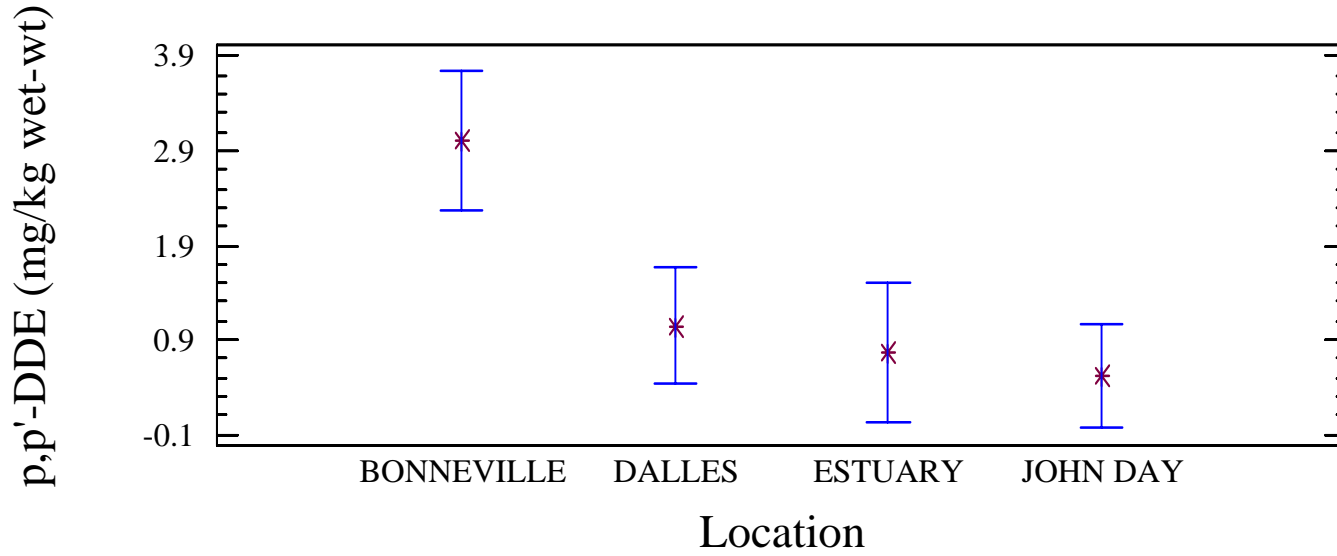
Liver
OCs, Enzymes, histology

CF, GSI, Age

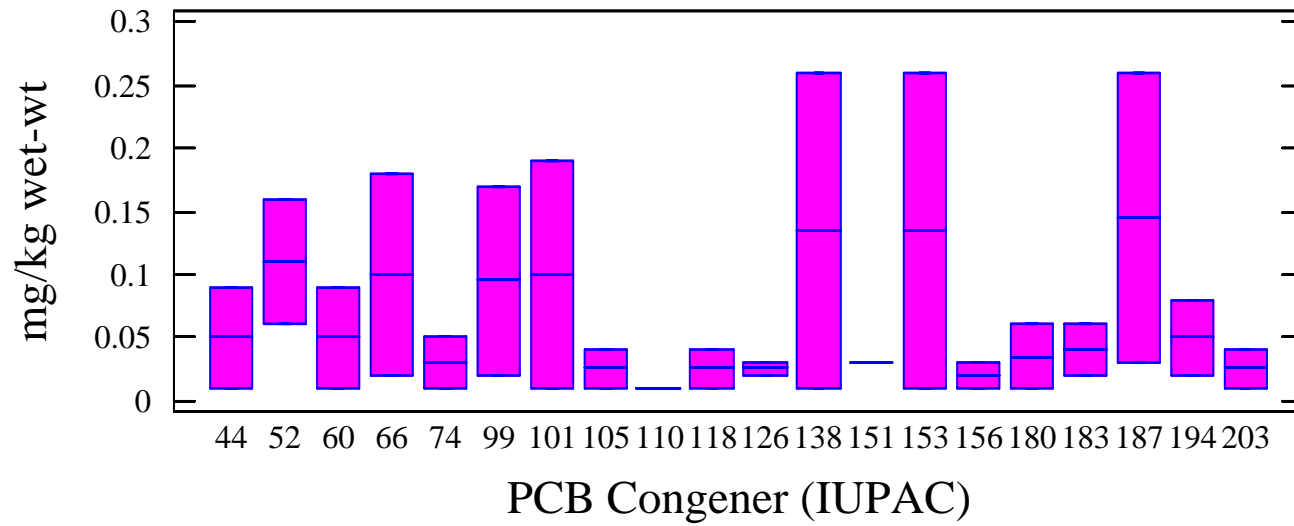
Chlorinated Pesticides in Liver & Gonad All Locations Year 2000



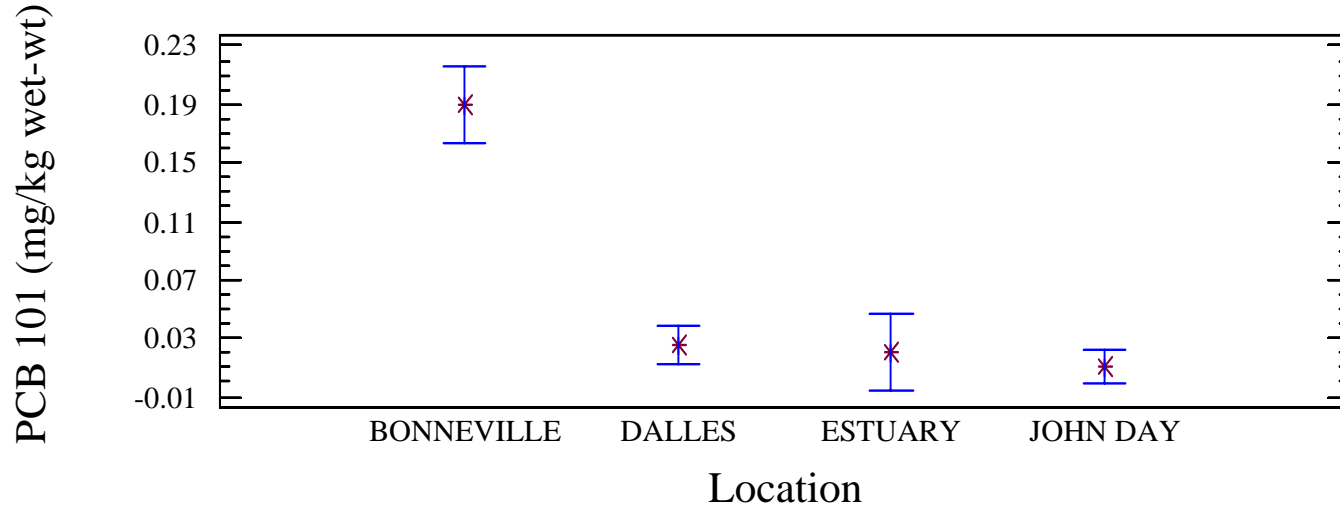
DDE Liver Concentrations 1997 & 2000 Male & Female

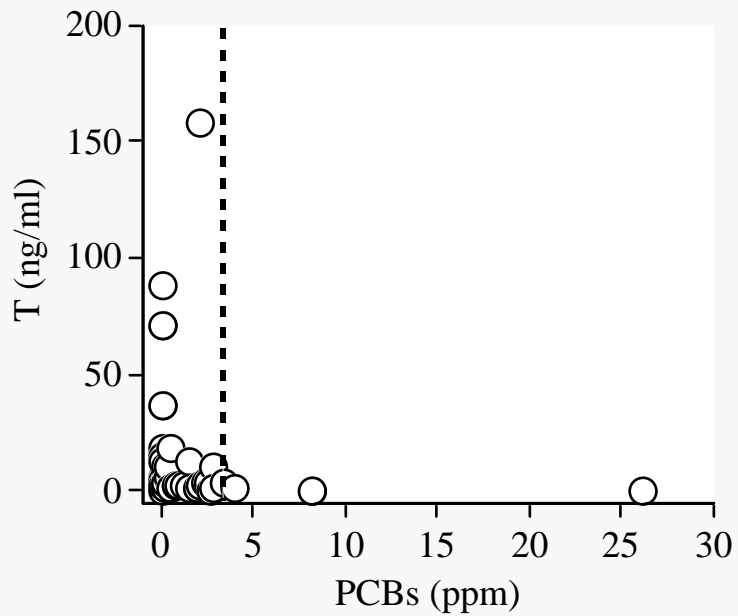
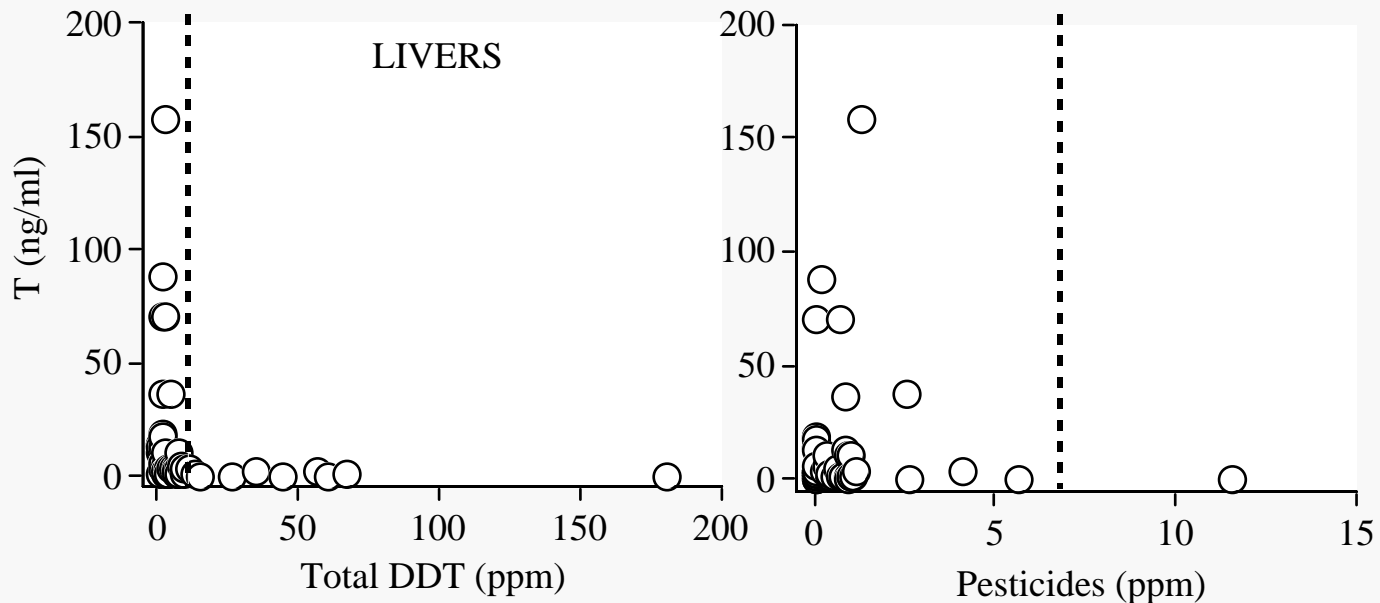


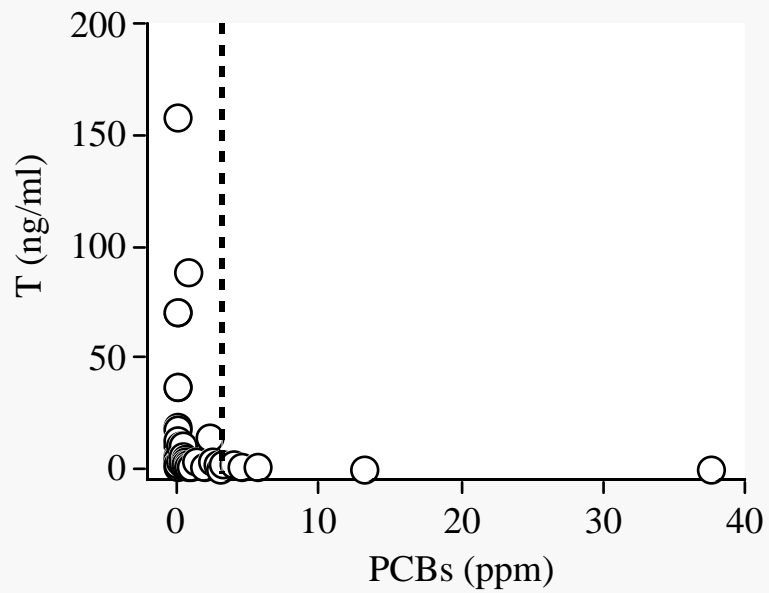
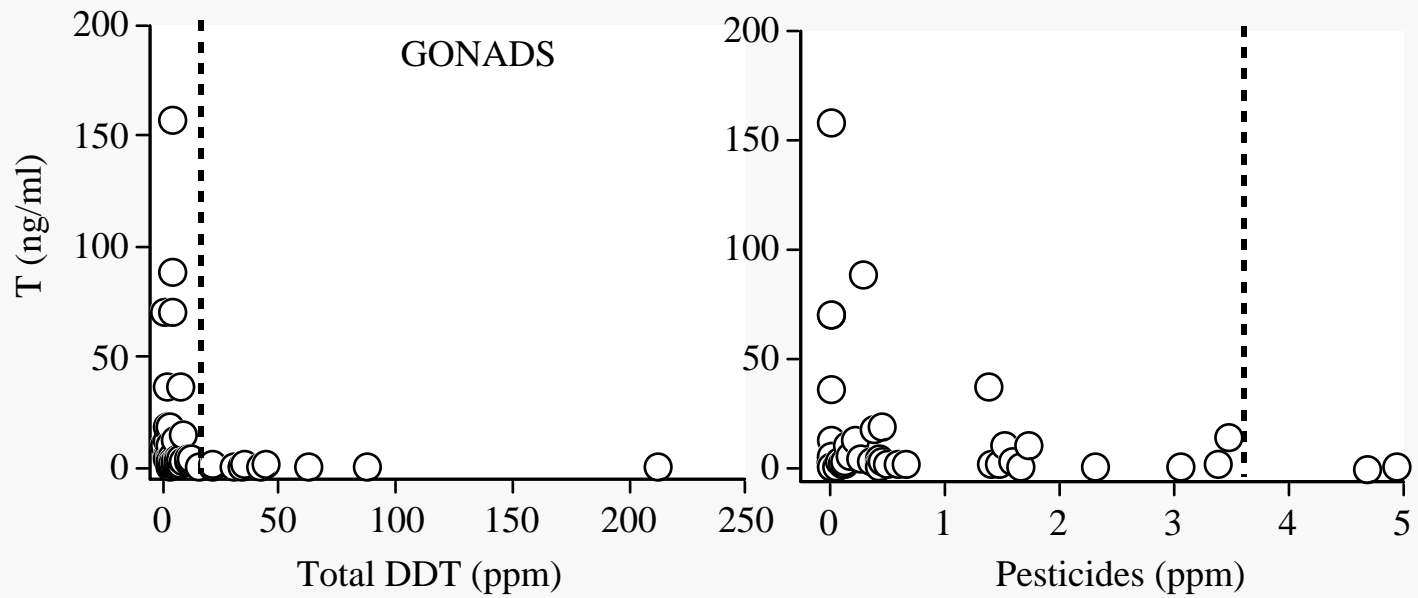
PCB Congeners in Liver & Gonad All Locations Year 2000



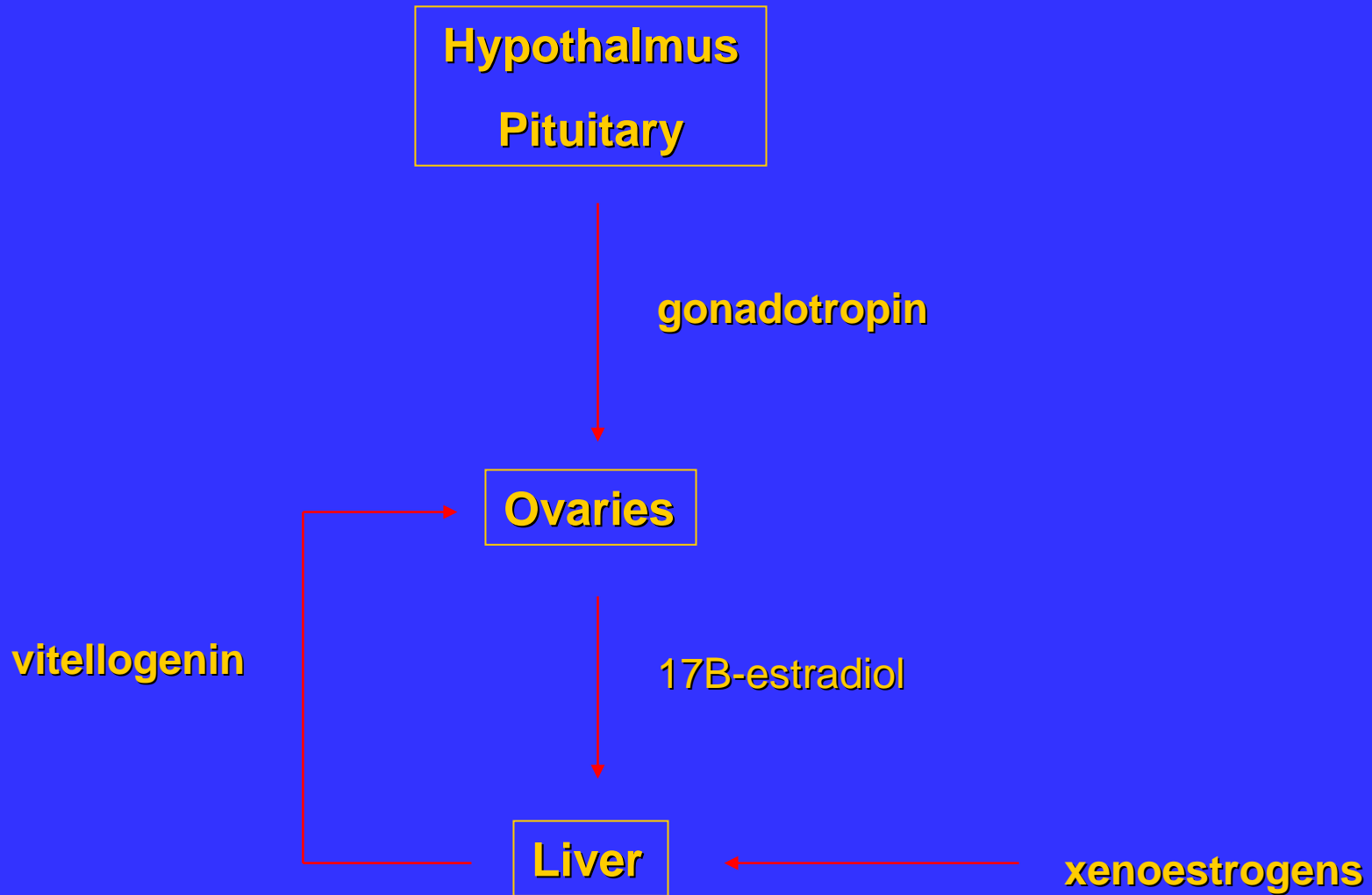
PCB 101 Liver Concentrations 1997 & 2000 Male & Female



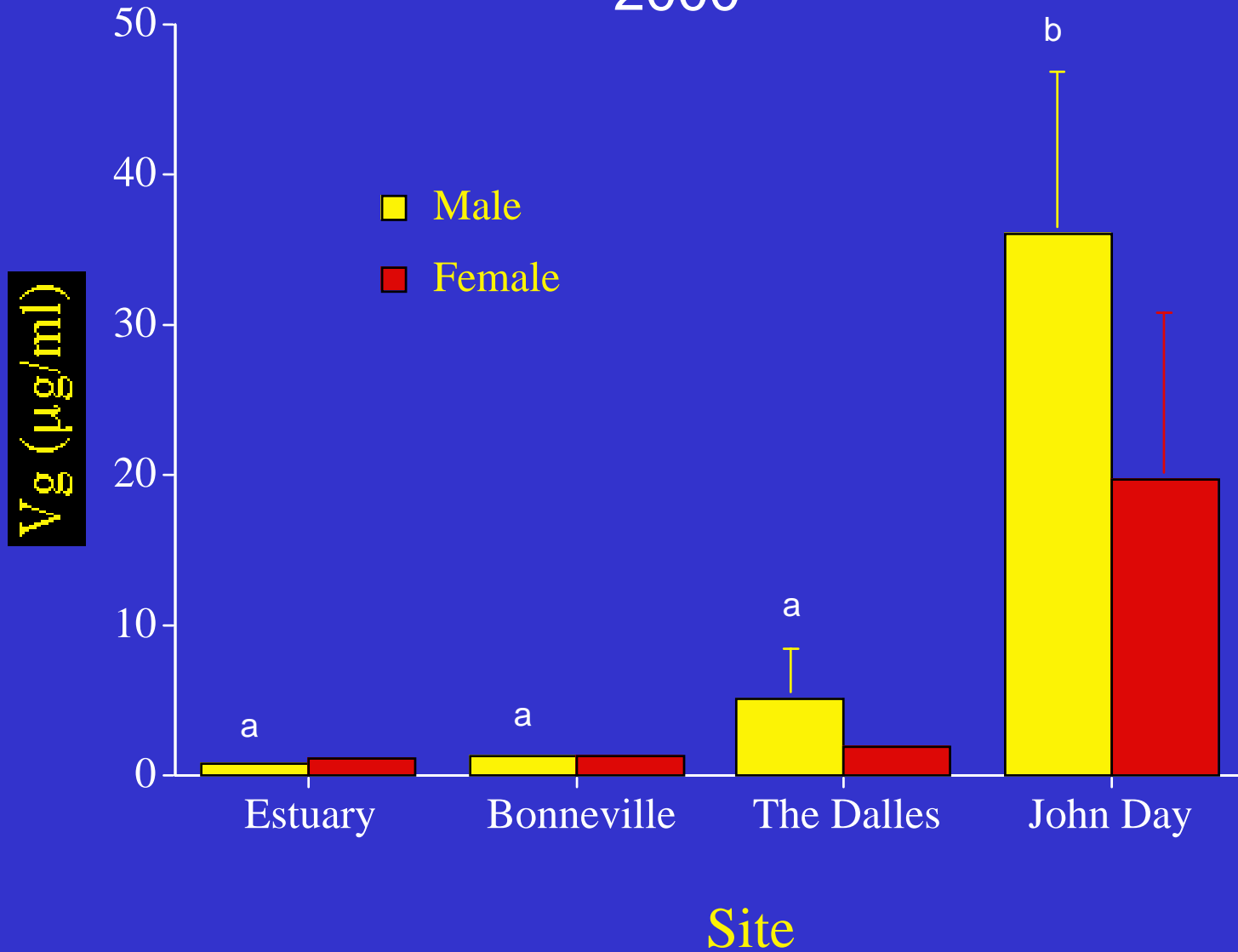




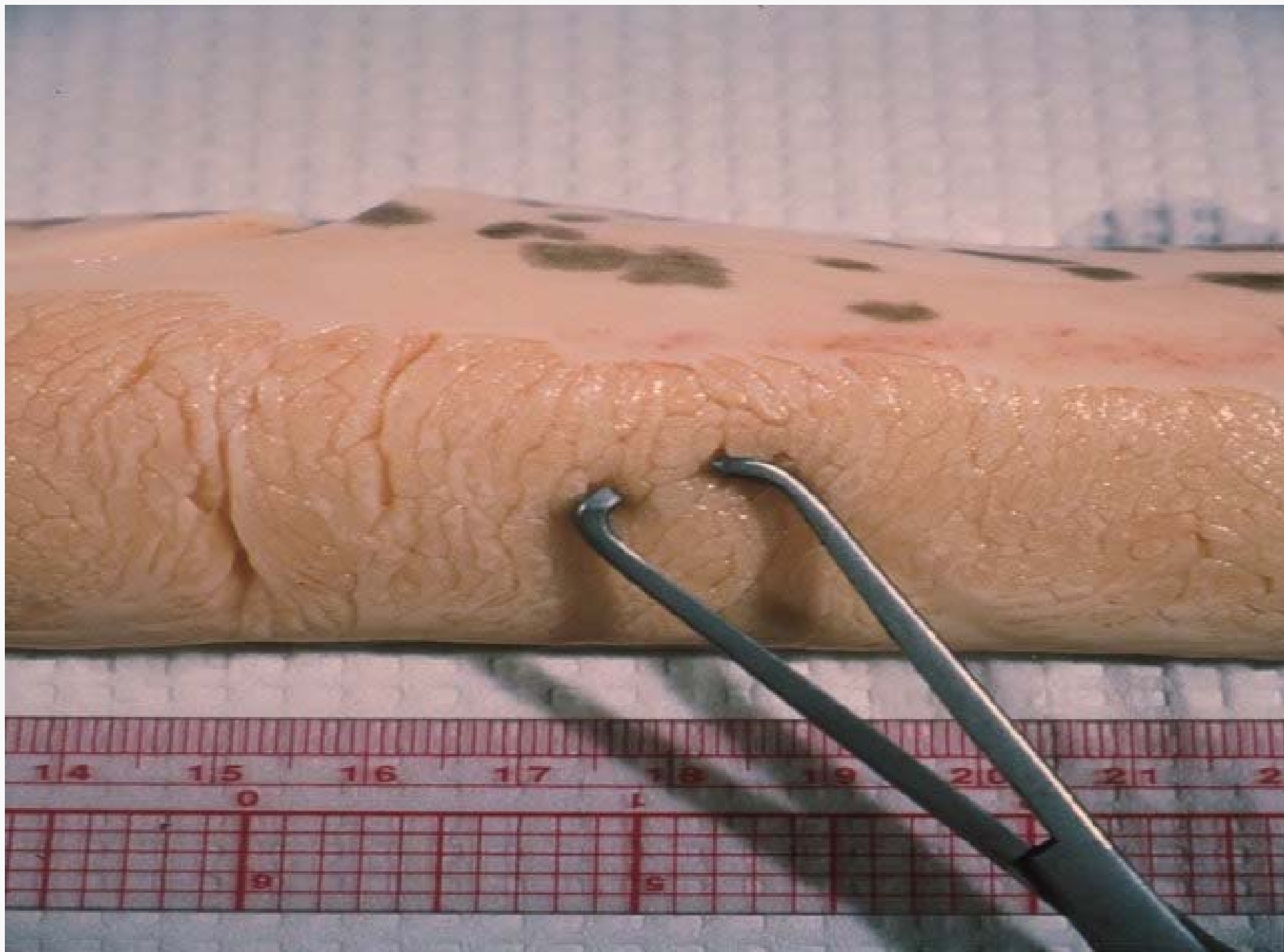
Vitellogenin Production and Endocrine Control



2000









Multiple Stressors Affecting Sturgeon



Flow
Temperature
Habitat
Disease
Food
Contaminants

