

Mallard Mercury Study on the South River 2007

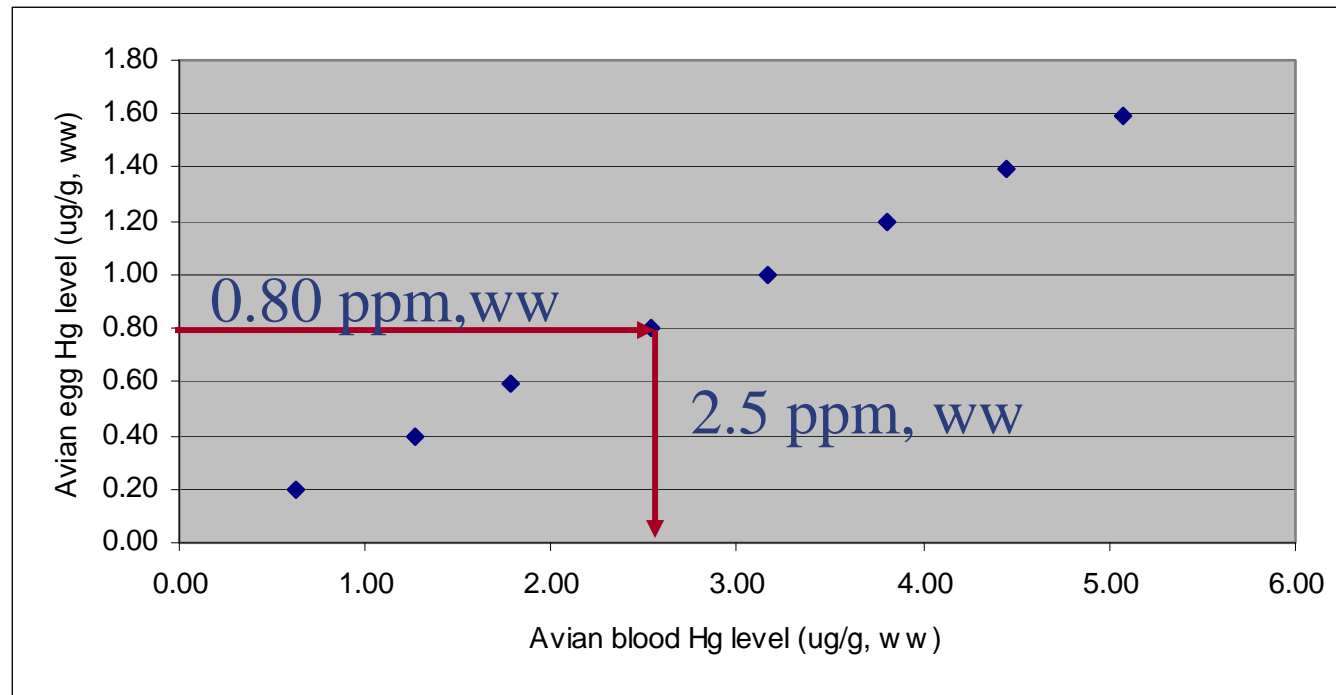




Study Objectives

- Live capture and collect blood and feather samples from breeding adult Mallards for Hg analysis
- Locate Mallard nest sites to collect eggs for Hg analysis
- Compare Hg results from the South River to the reference sites and published literature
- Determine if Hg levels in Mallards exceed levels associated with adverse affects in behavior and reproduction in lab based studies

Purpose of the Study





Methods

- Live decoy traps and baited snap traps were deployed at river sites where Mallard pairs were observed
- Nest traps were set when a nest was located in order to trap and sample the incubating hen

Live Decoy Trap





Walk in Nest Trap

Hen captured in trap





Sampling

- All captured Mallards were sampled for blood and feathers, measurements recorded, and banded with a USFWS band
- Hens were equipped with a radio transmitter in order to track to her nest











Sampling Summary

- Captured 48 Mallards
- Collected 107 eggs (consisting of 8 entire clutches); 2 clutches from the reference and 6 from the South River
- Equipped 5 hens with radio transmitters
- Sampling on the SR from Basic Park to Grottoes

Multiple Clutches and Sampling

- We collected a second clutch from 2 separate hens
- Recaptured and sampled blood from 6 birds
- Will help determine if Hg levels increase in Mallard eggs later in the season





Lab Analysis

- All samples are currently at the Trace Element Research Laboratory (TERL)
- Results have not yet been reported

Unlikely Suspect



Hg in Bats from the South River 2007





Study Objectives

- Determine bat species presence on the South River using Sonabat
- Establish a Hg exposure profile in bats from the South River
- Run physiological tests on bats



Sampling Locations

- Genicom , mile 2
- Forestry Center, mile 13
- Cosby Mill, mile 16
- Honeysuckle Hill, Middle River



Target Sample Size

- 35 bats per site
- 3 SR sites
- 2 Reference sites
- 175 bats total



2007 Field Sampling Summary

- Study is ongoing
- Bats have been trapped from 3 SR sites and 1 reference site
- 6 species of bats have been captured (Red Bat, Hoary Bat, Northern Long-eared, Big Brown, Little Brown, Eastern Pipistrelle)



Bats Sampled to Date

- 63 bats from the SR
- 19 bats from the reference