

American shad Population Assessment in the Susquehanna River



Presentation for SRAFRC annual TC meeting
10 December 2018

All typical surveys and analyses were conducted in 2018

Sampling\Studies:

Assessments:

Hook & Line

Composition
(age, gender, repeat spawning)

Mark recapture

Adult abundance

Recreational Surveys
(Logbook & Creel)

Juvenile abundance

Upper Bay Seining

Hook & Line Survey

Typical Year

- Mid-April through end-May
- Average # of hours: 51
- Average # of fish: 502

2018

- April 26 – June 1
- Hours fished: 27.8
- Fish captured: 177

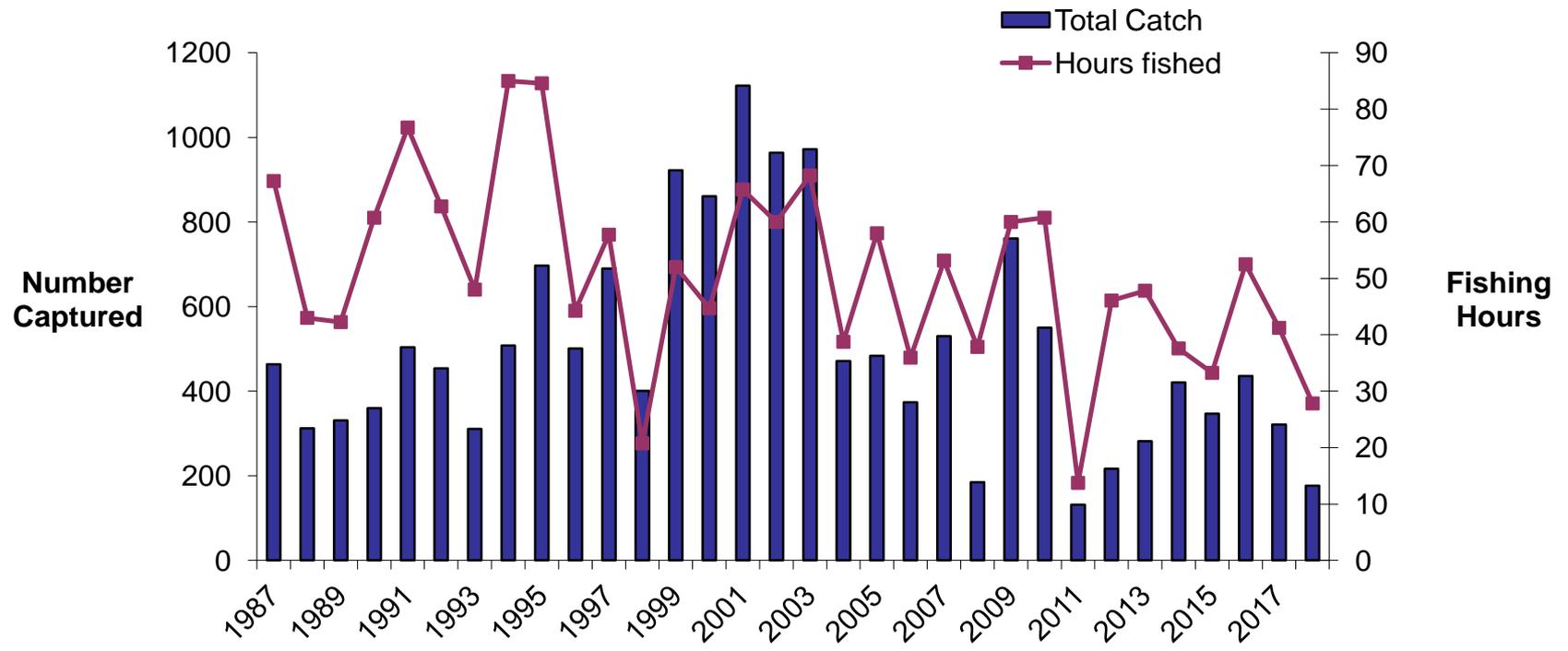


Tagged 159 Fish

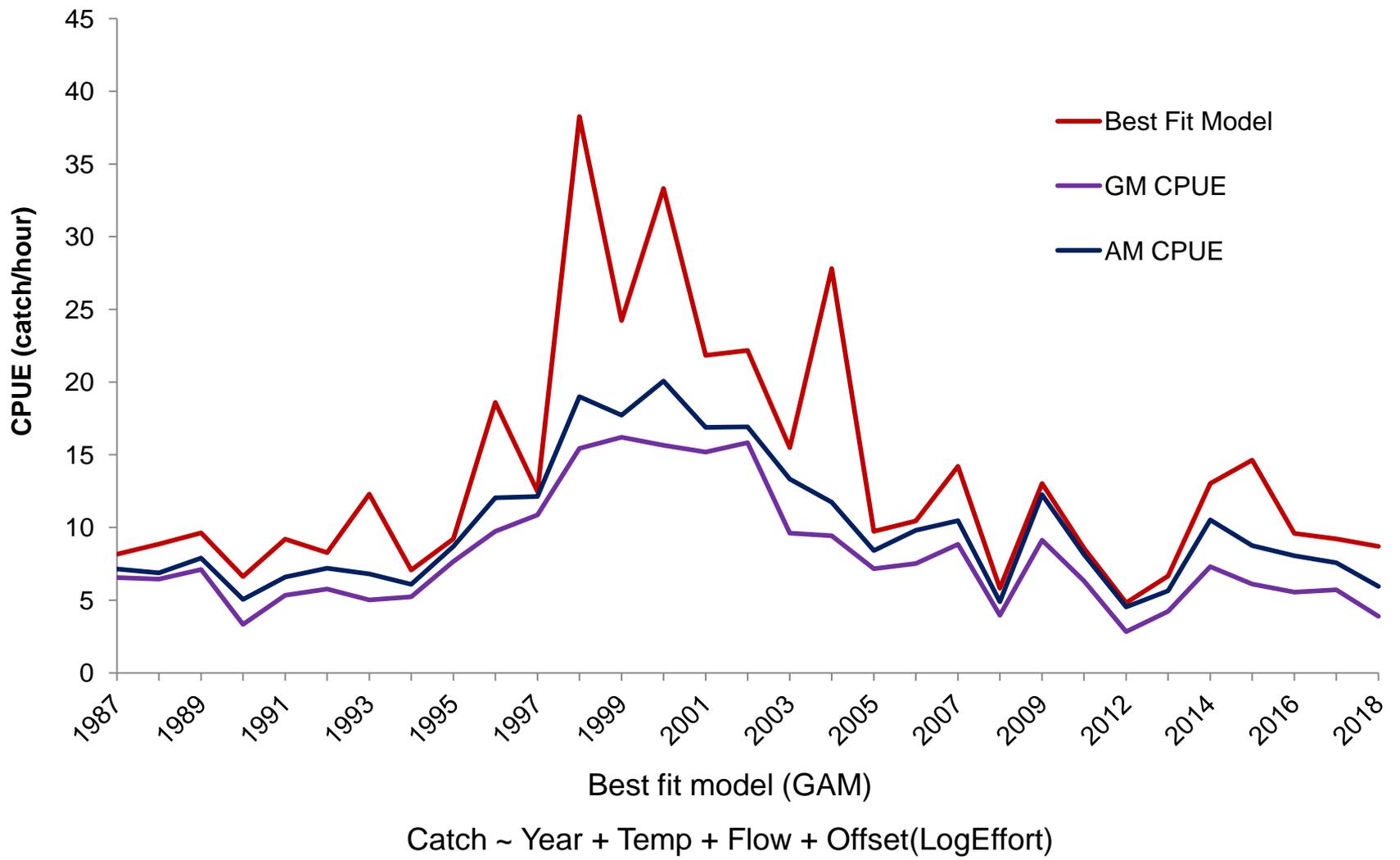
M:F Ratio = 1 to 1.79

Hook & Line Survey

Catch and Effort



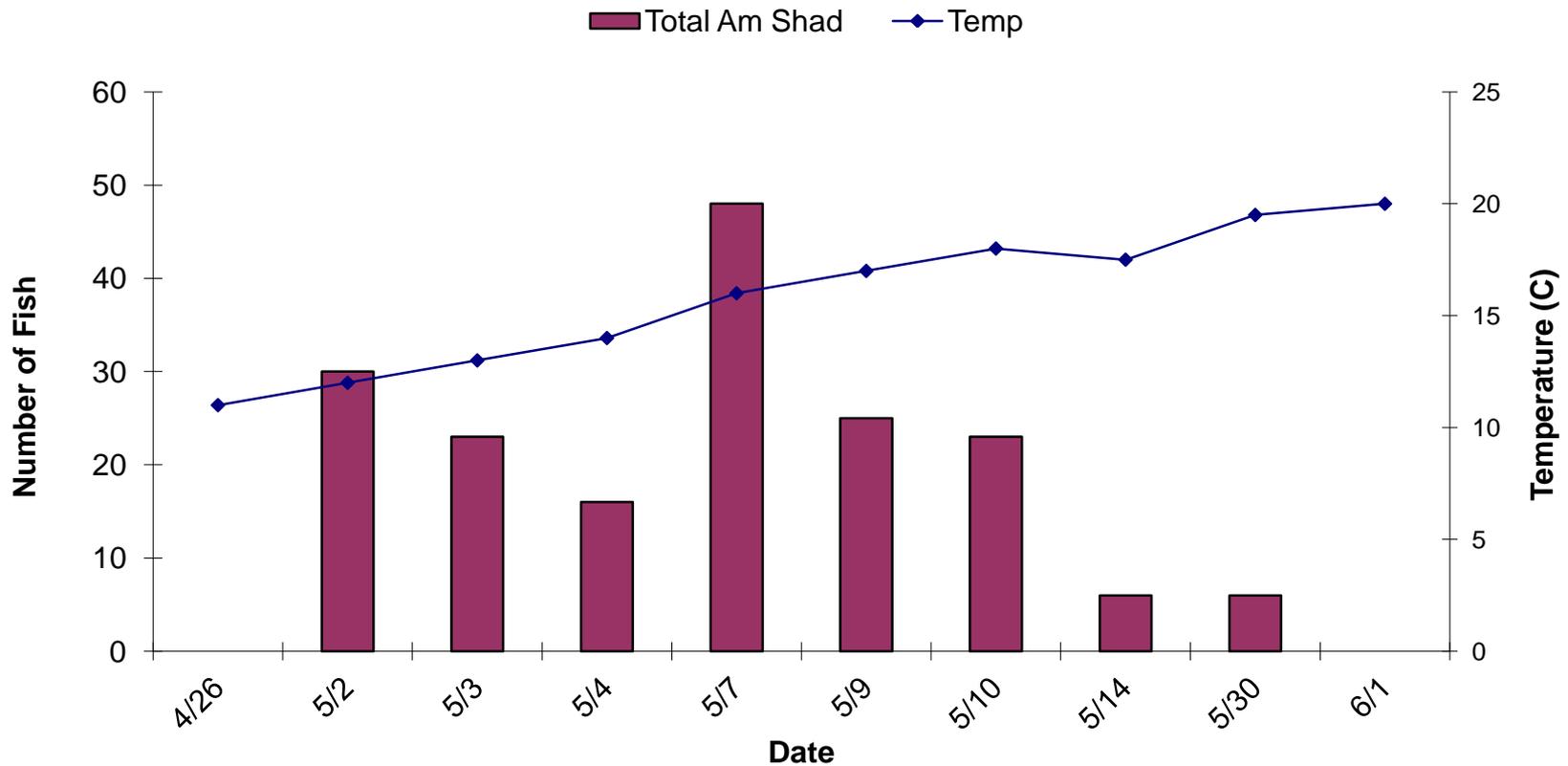
Hook & Line Survey



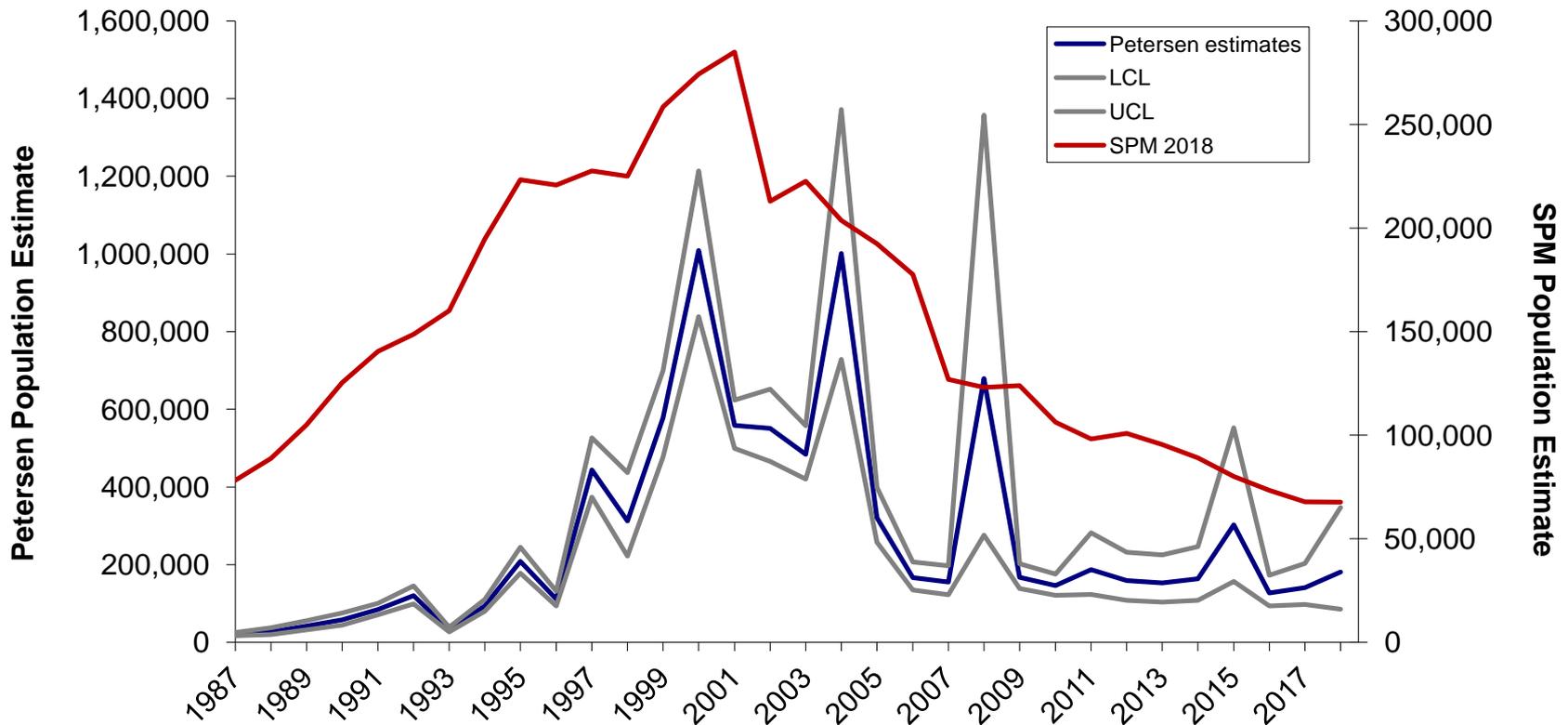
Hook & Line Survey

2018 Daily Counts

Peak catch was on May 7th; Temp was 16°C

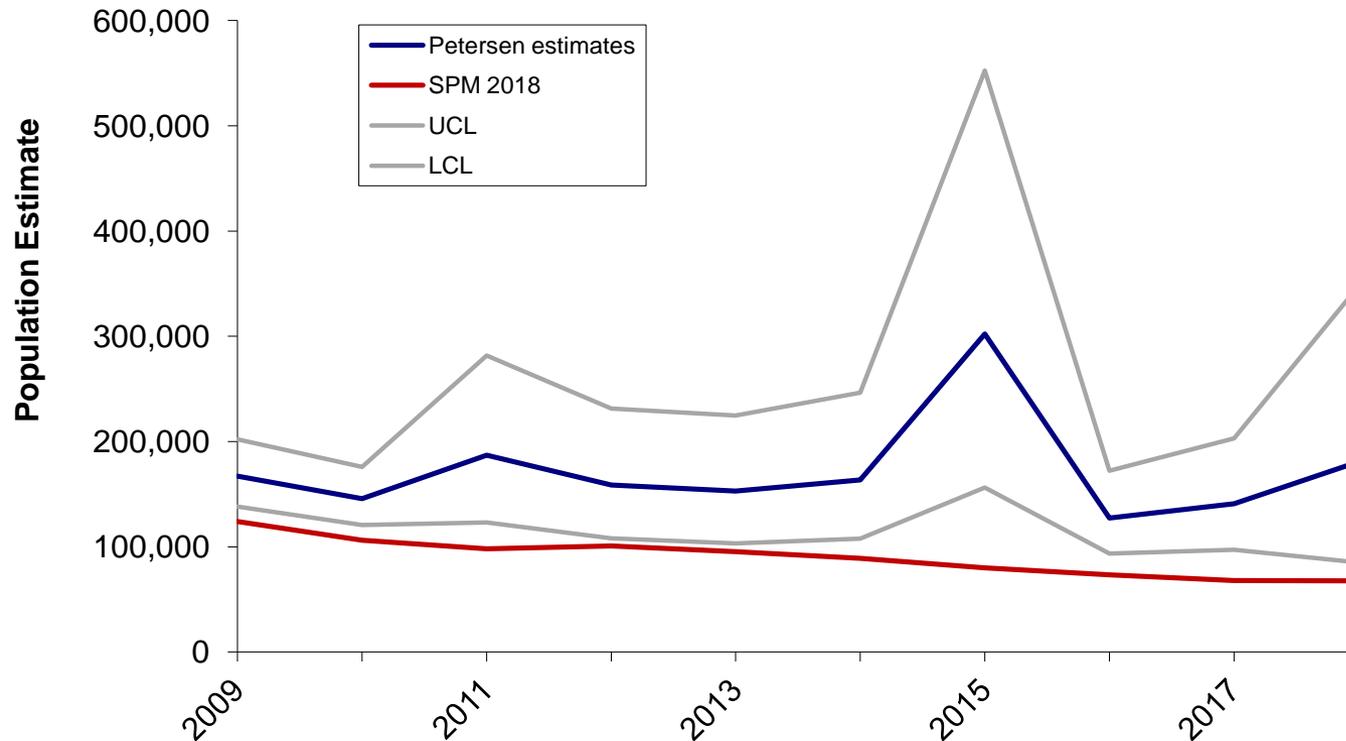


Population Estimates



- Petersen estimate: 180,601 fish
2004, 2008, 2014, 2015, 2017, & 2018 low recapture rates (<0.1)
- Surplus Production Model Estimate: 67,705 fish
- Trends are more important than point estimates

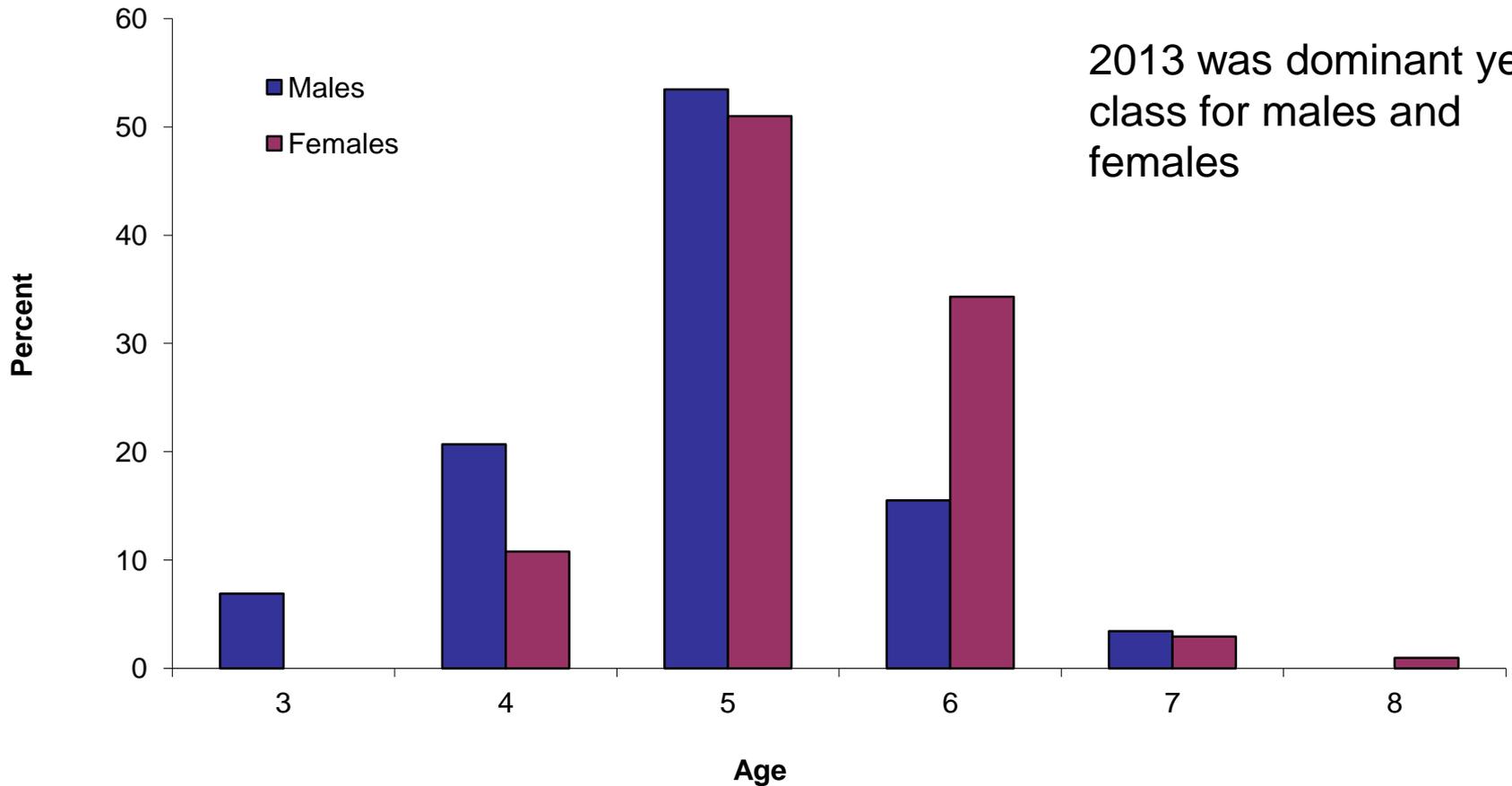
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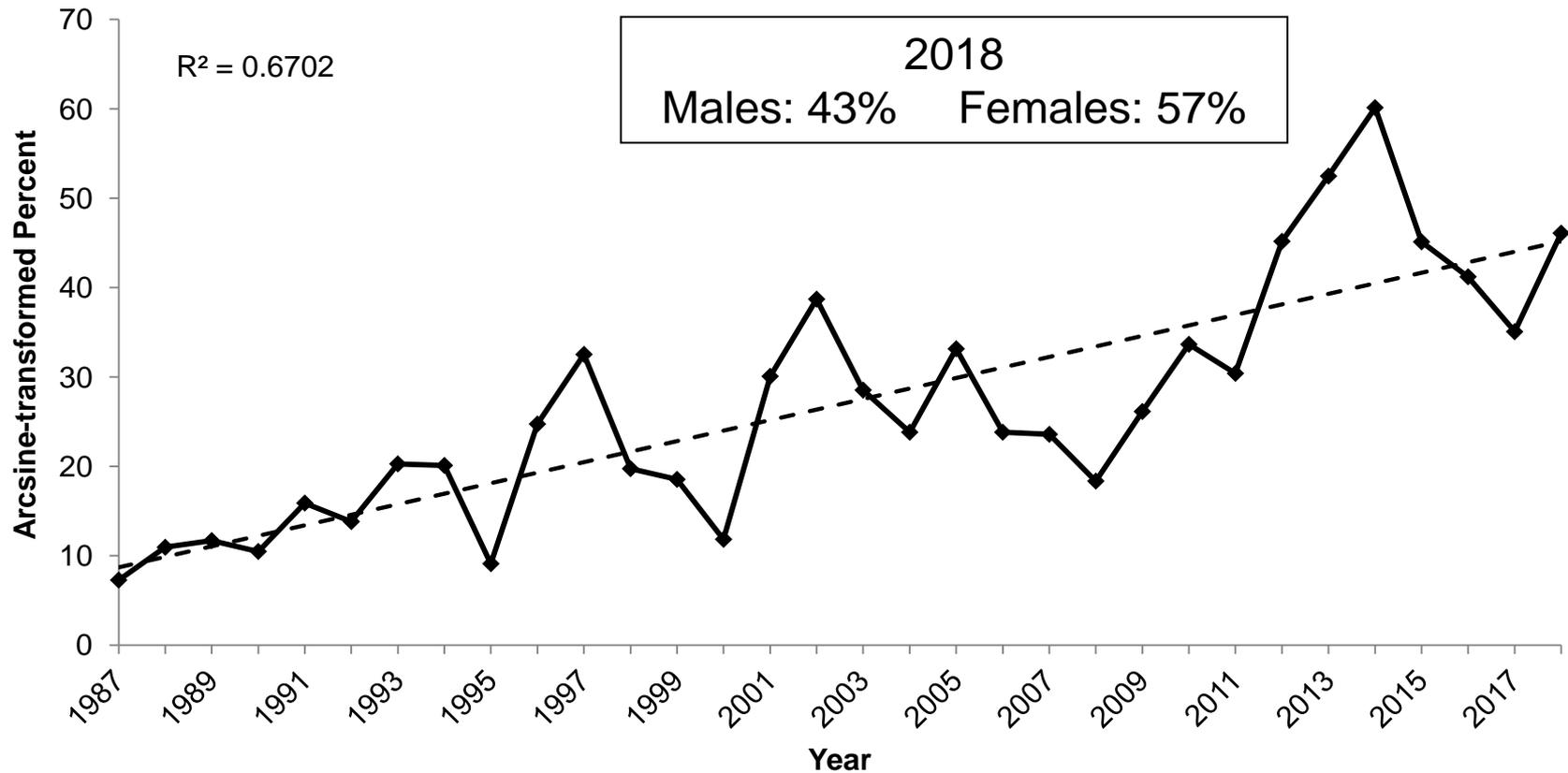
Hook & Line Survey

Age Structure



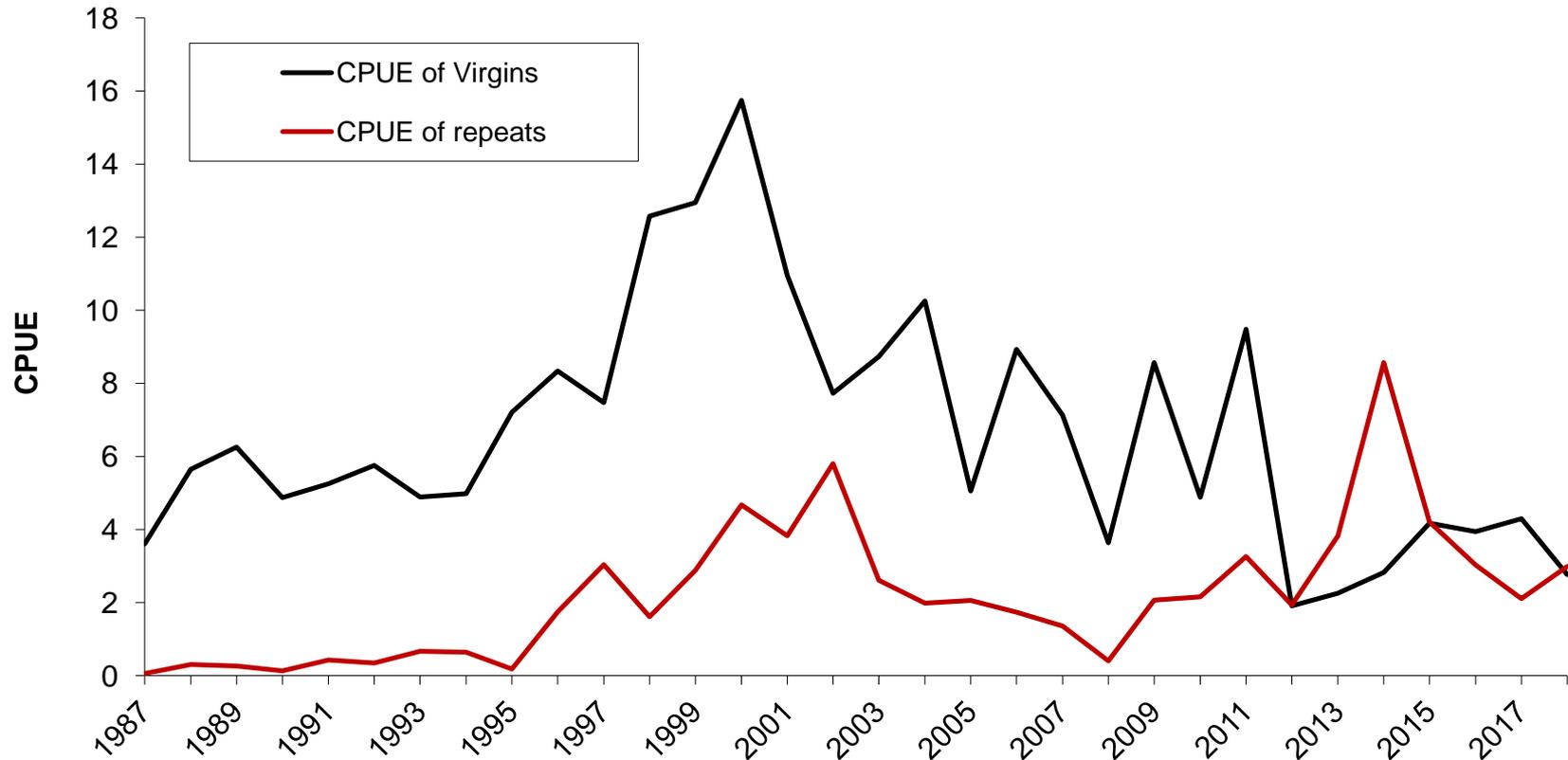
Hook & Line Survey

Repeat spawners in the tailrace

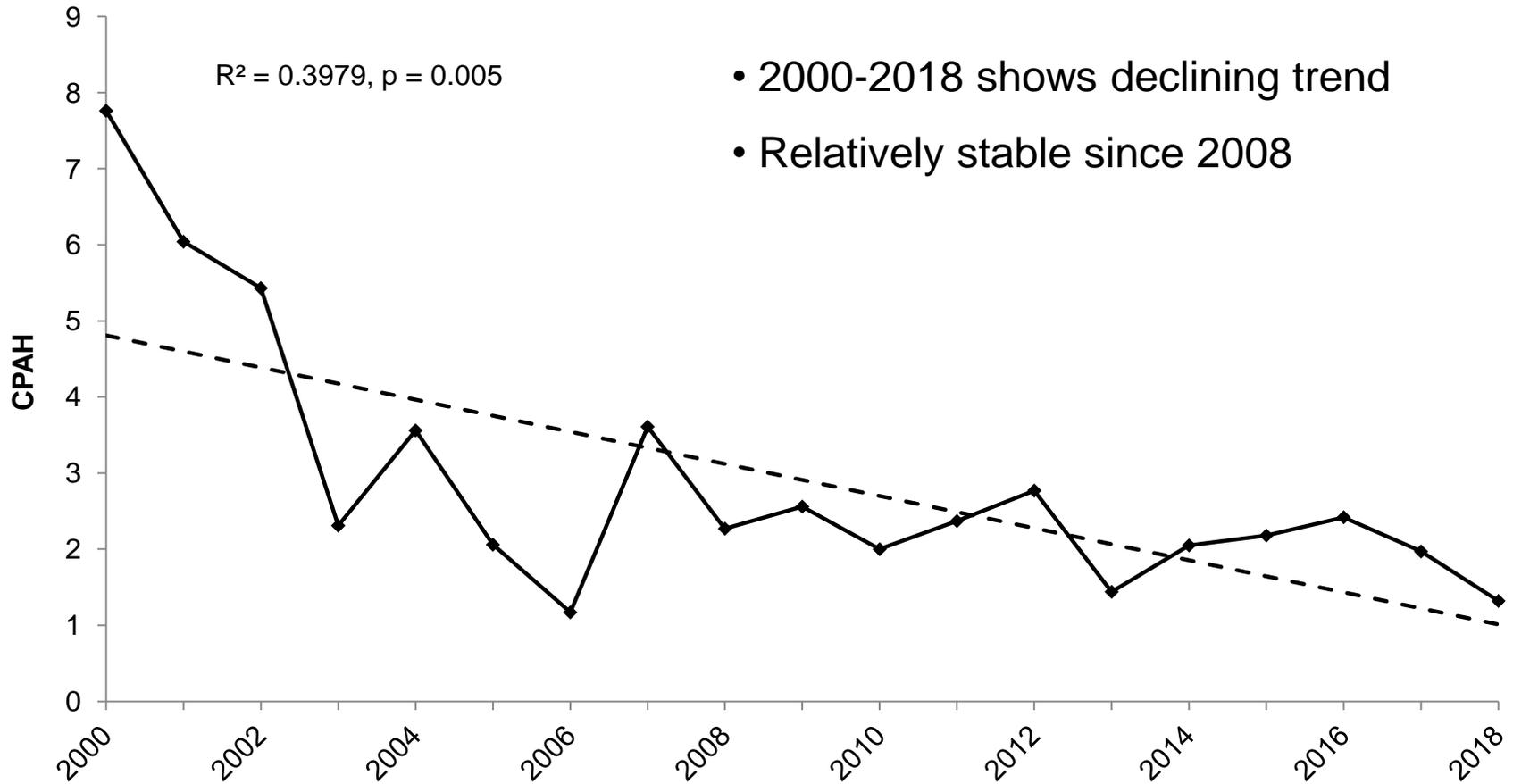


Hook & Line Survey

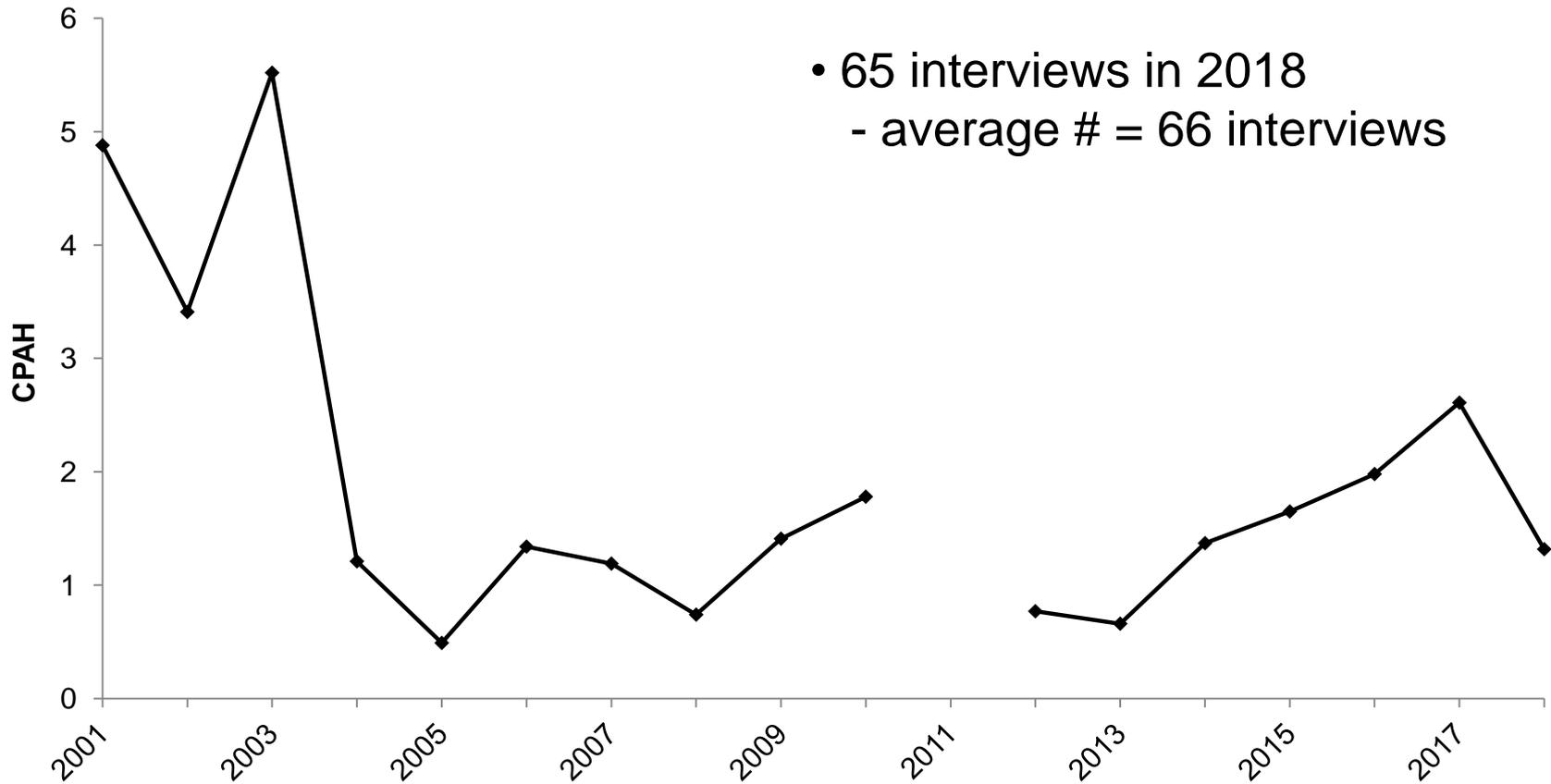
Virgin vs. Repeat Spawners



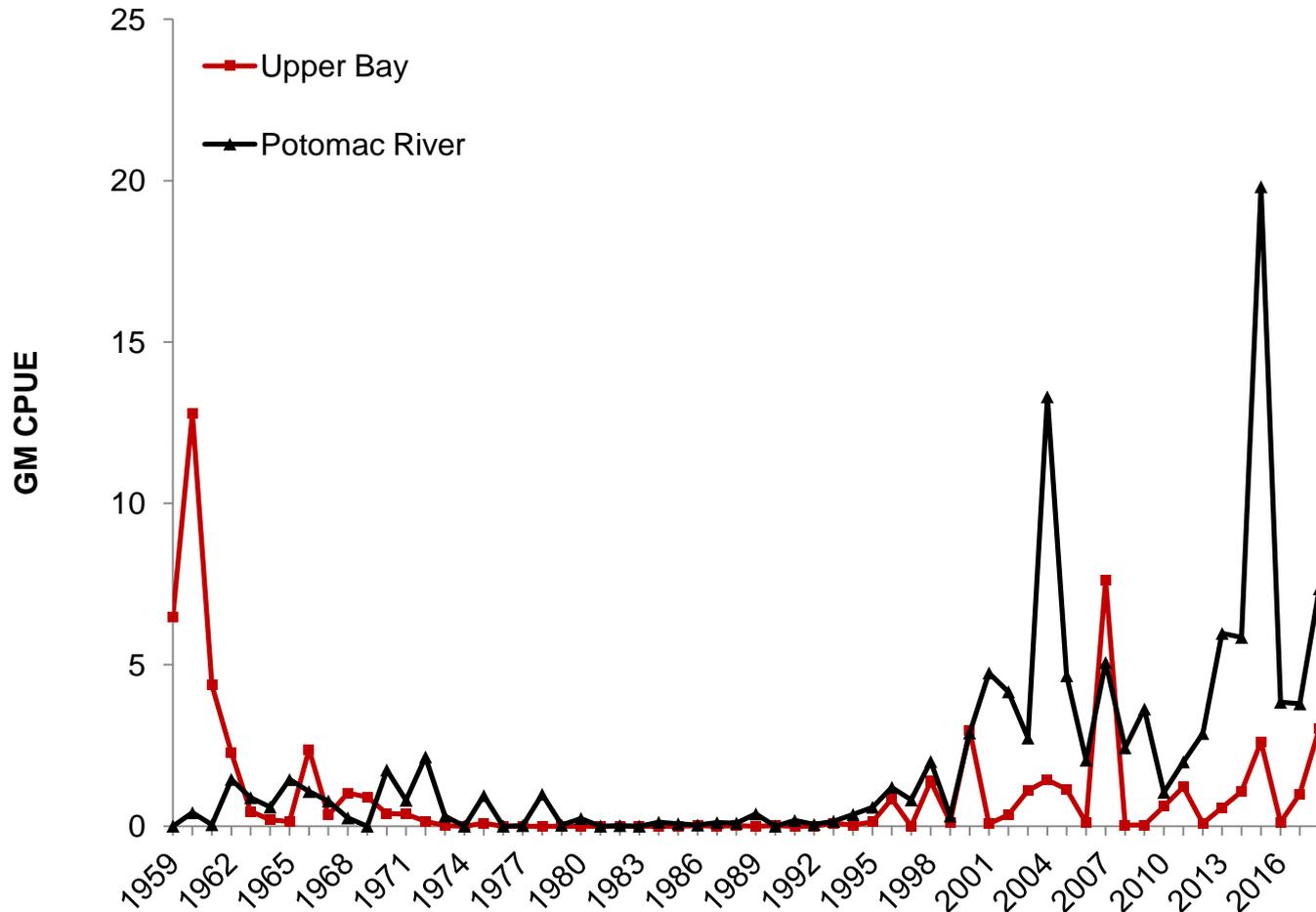
Logbook Survey - American Shad



Creel Survey – American Shad



Juvenile American Shad Index

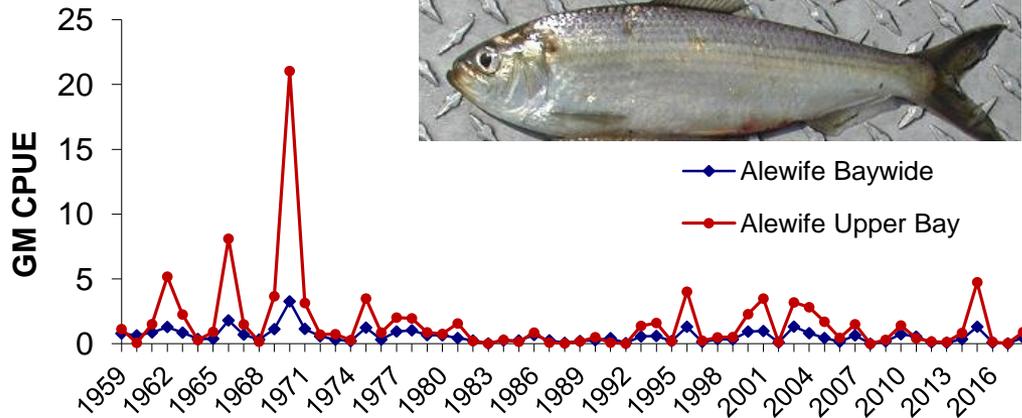


Potomac:
2018 was 3rd
highest value on
record

Upper Bay:
2018 was 4th
highest value on
record

River Herring

Alewife



Juvenile Indices:

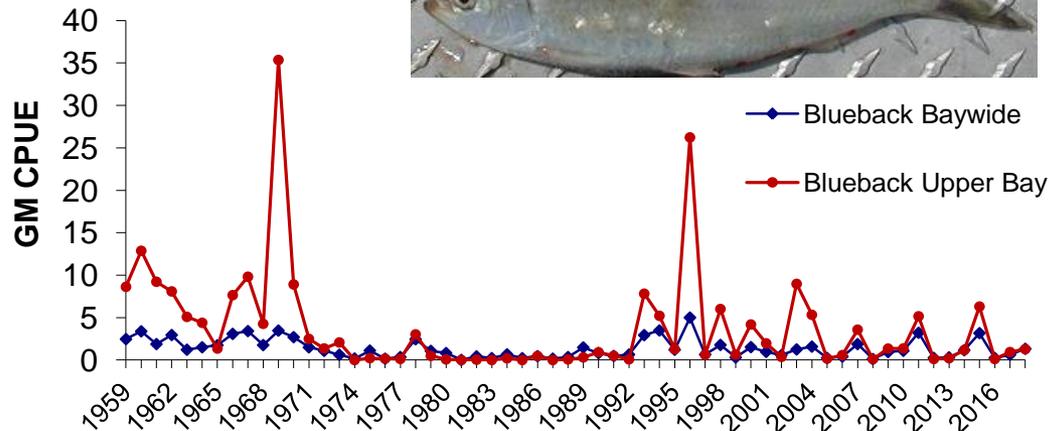
* Alewife and Blueback increased in all systems in 2018.

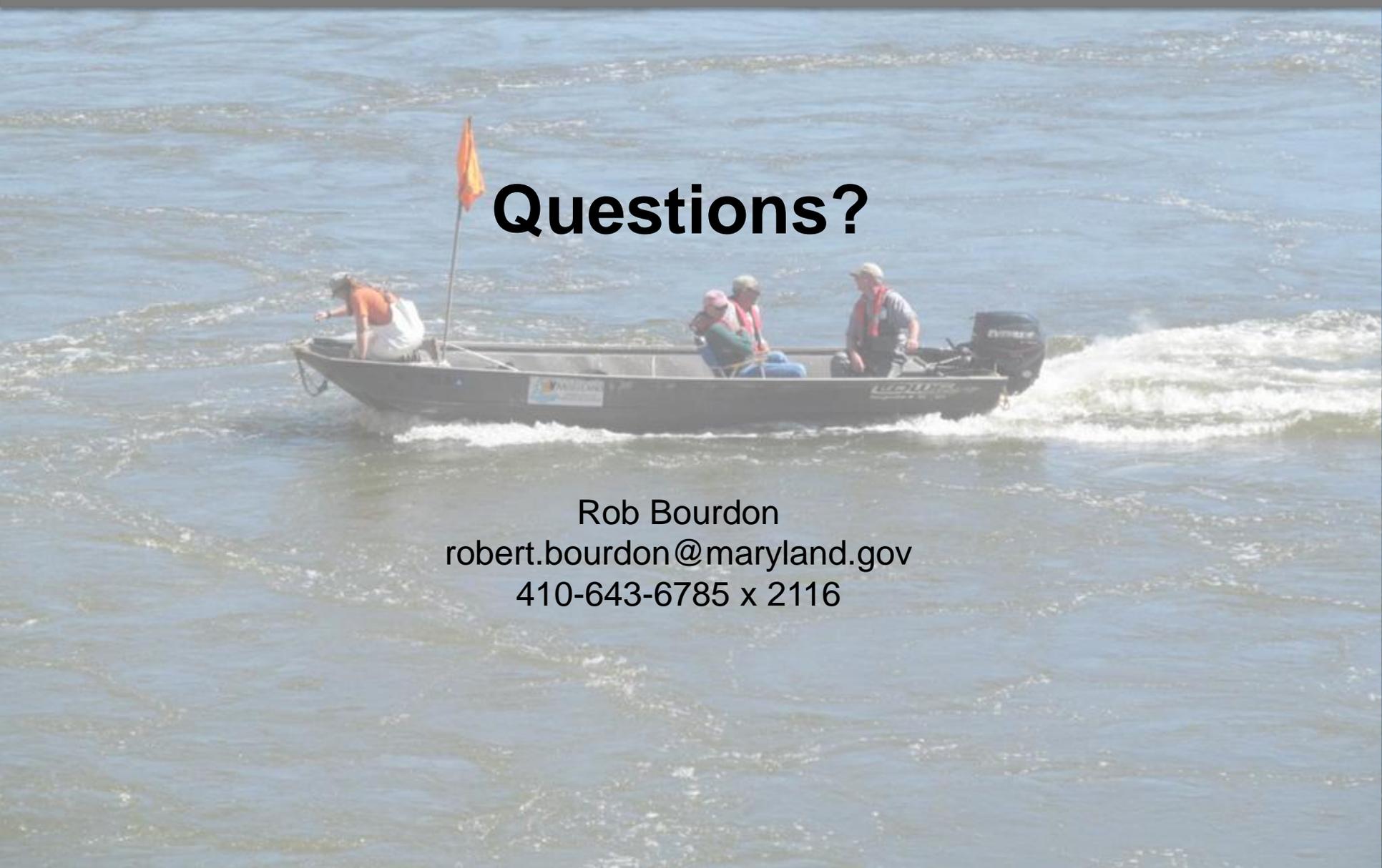
Adults: (North East River)

* Alewife run peak 4/3/18, water temp was 9.3°C

* Blueback run peak 5/8/18, water temp was 20.1°C

Blueback





Questions?

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