

Lees Ferry rainbow trout fishery 2011 Status Report

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Background and objectives

- Long-term monitoring of rainbow trout population in Lees Ferry reach of Colorado River
 - Electrofishing
 - 1991-present
 - Relative abundance
 - Size structure
 - Angler Creel
 - Intermittently from 1963-present
 - Catch Rates
 - Effort



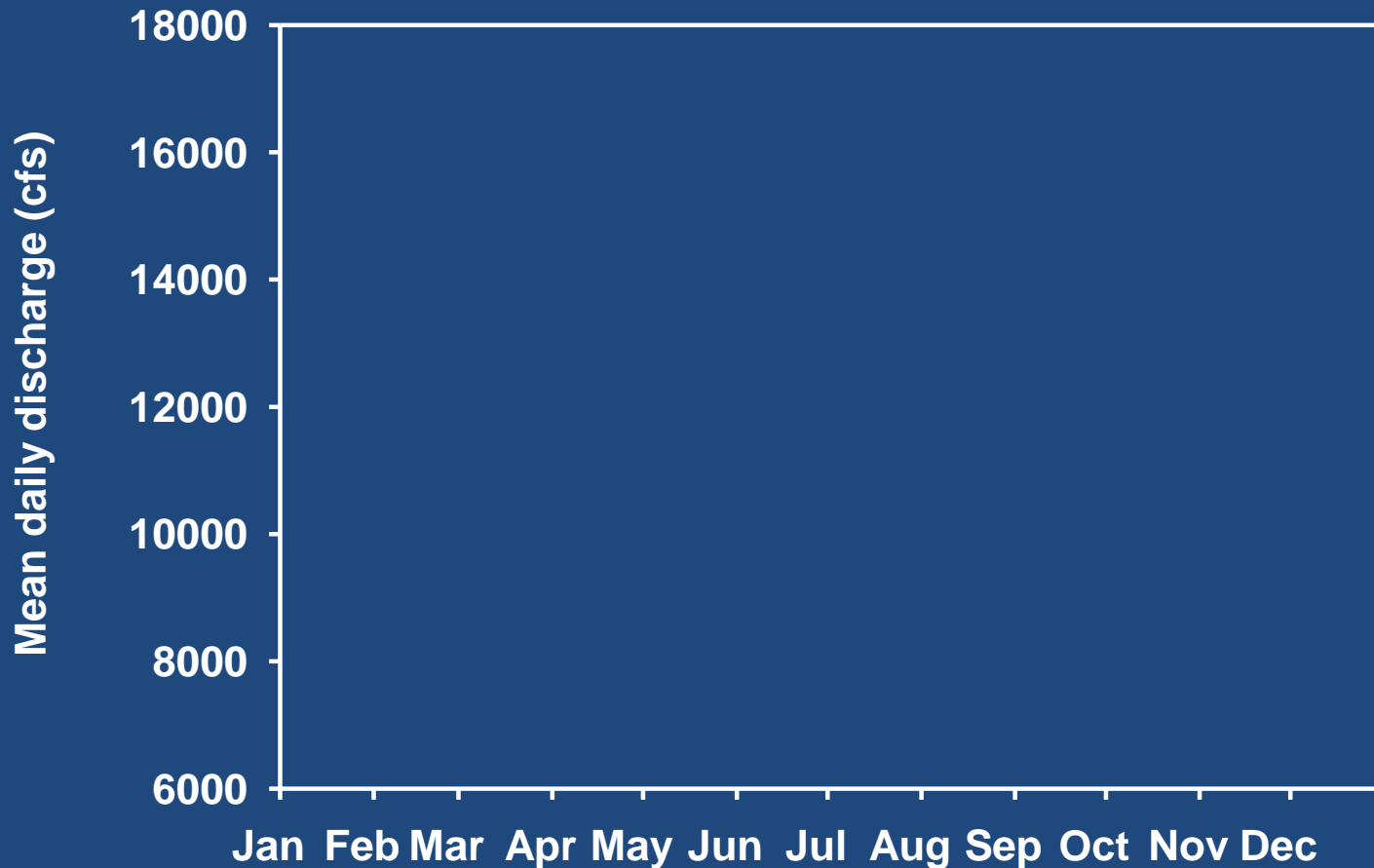
Flow Regimes

- 1991-2010
 - Mostly modified fluctuating flows with the exception of a few years
- 1996, 2004, 2008
 - High flow experiments
 - 1996, 2008-Spring high flow event
 - 2004-Fall high flow event
- 2003-2005
 - Trout suppression flows
- 2011
 - Lake Mead Equalization flow



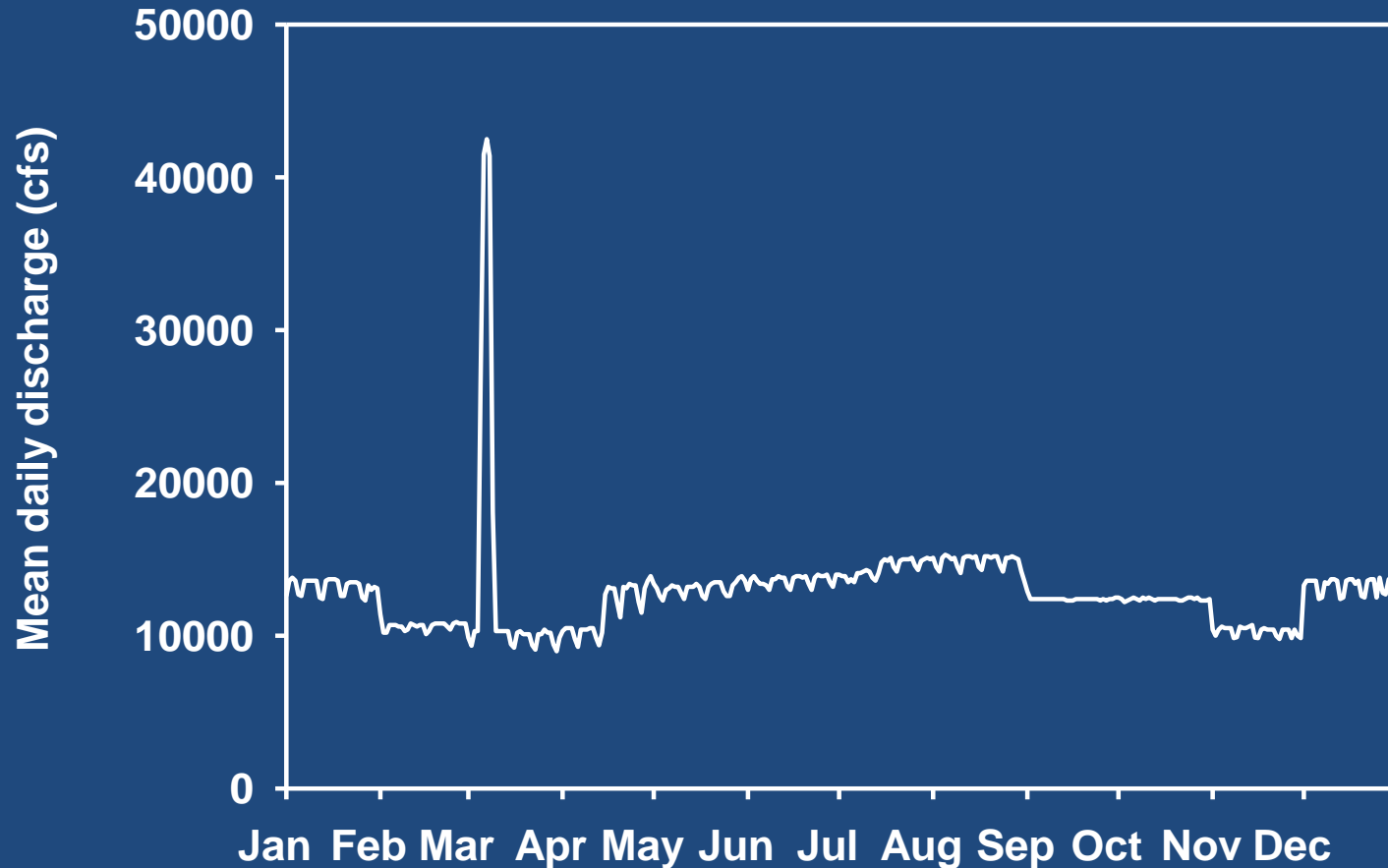
Fluctuating flows

- 1991-2010
 - Mean peak discharge = $18,823 \pm 2,518$ cfs
 - Mean discharge = $12,816 \pm 683$ cfs



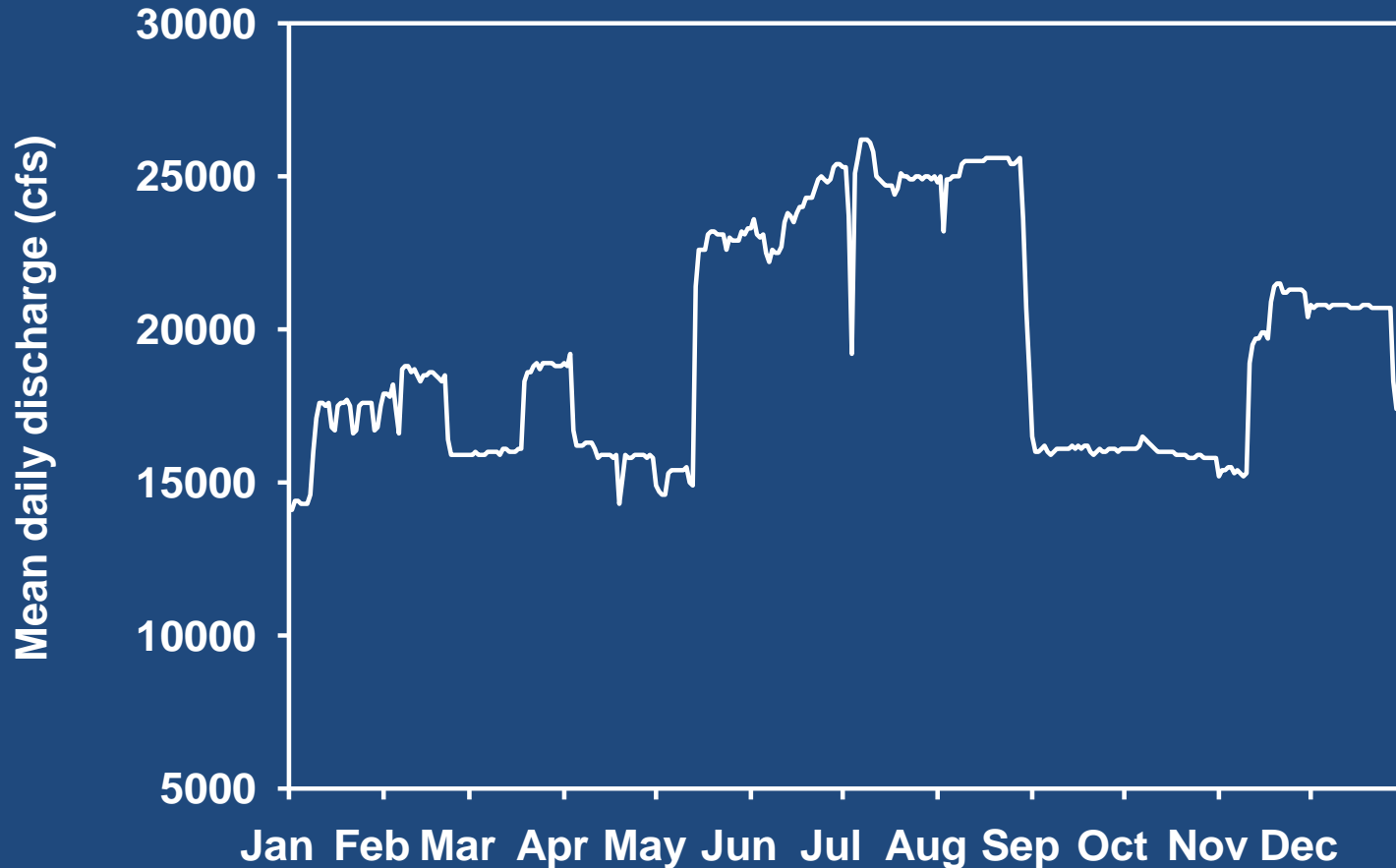
High Flow Experiments

- 2008- March 26-April 3
 - Peak discharge = 42,500 cfs
 - Mean discharge = $12,830 \pm 326$ cfs



Equalization Flow

- 2011
 - Peak discharge = 26,200 cfs
 - Mean discharge = $19,326 \pm 380$ cfs



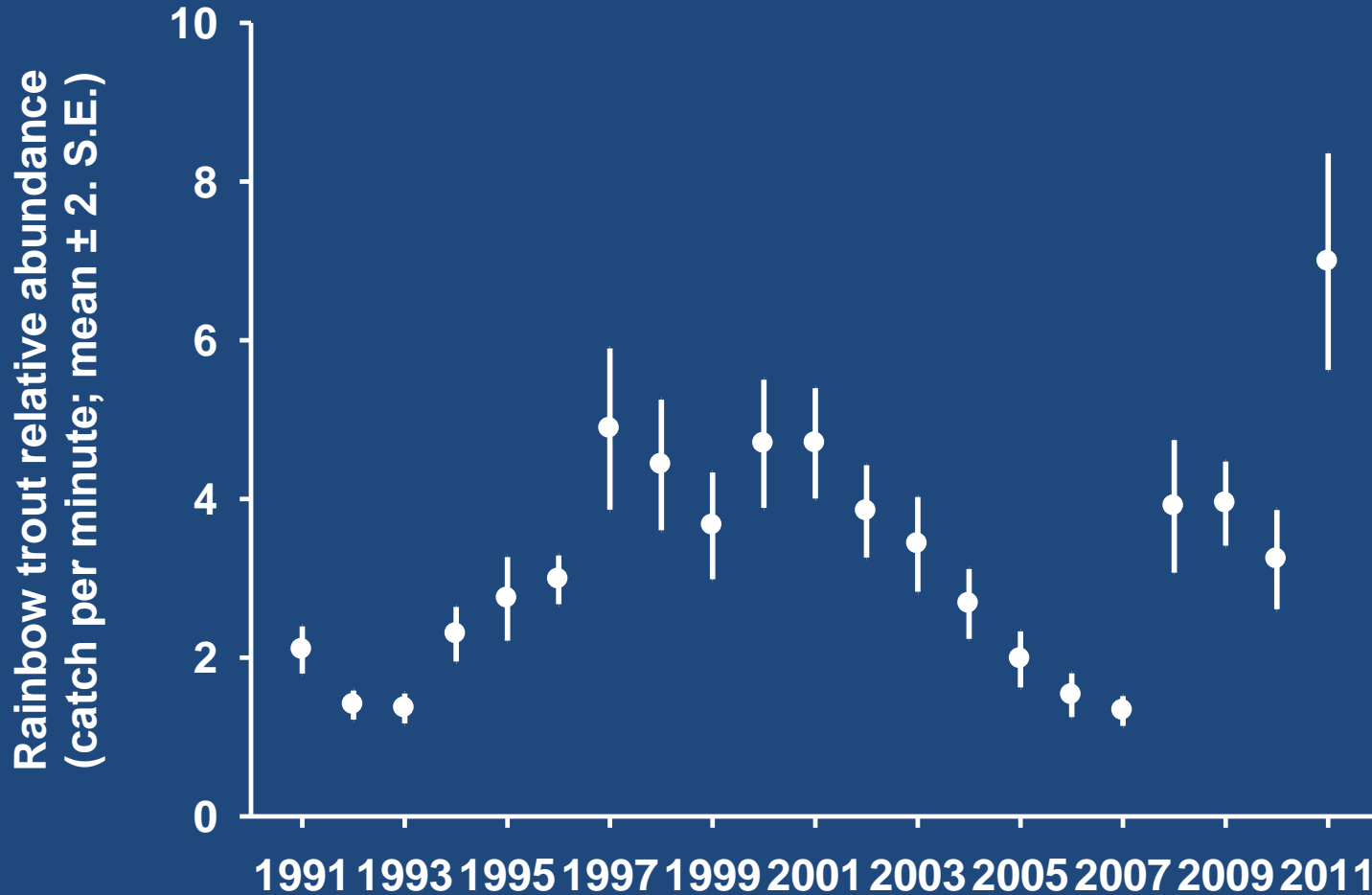
2011 Sampling

- April 12 – 14
 - Total RBT catch – 972
 - Floy recaptures – 2
 - New Floy tags – 241
- July 25 – 28
 - Total RBT captured – 1,307
 - Floy recaptures – 2
 - New Floy tags – 463
 - Non-native surveillance
- October 18 – 20
 - Total RBT captured – 3,821
 - Floy recaptures – 3
 - New Floy tags – 626



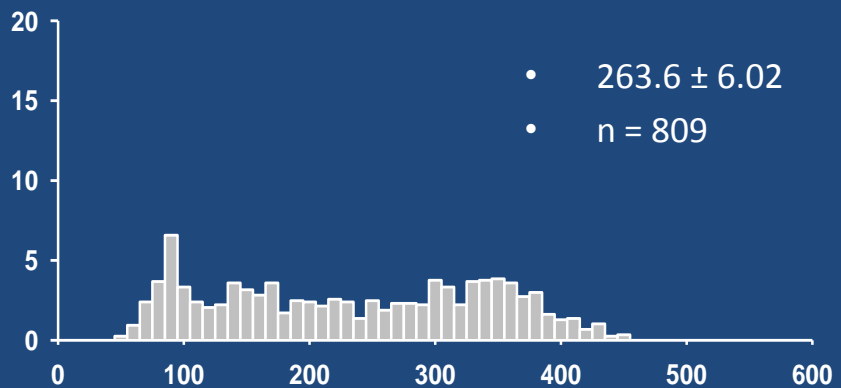
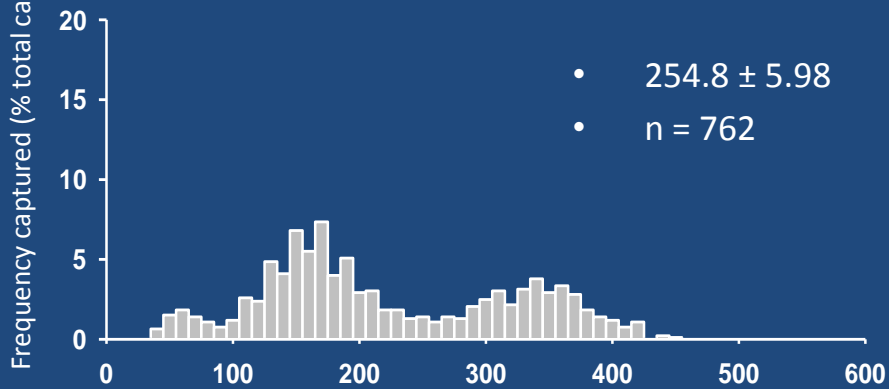
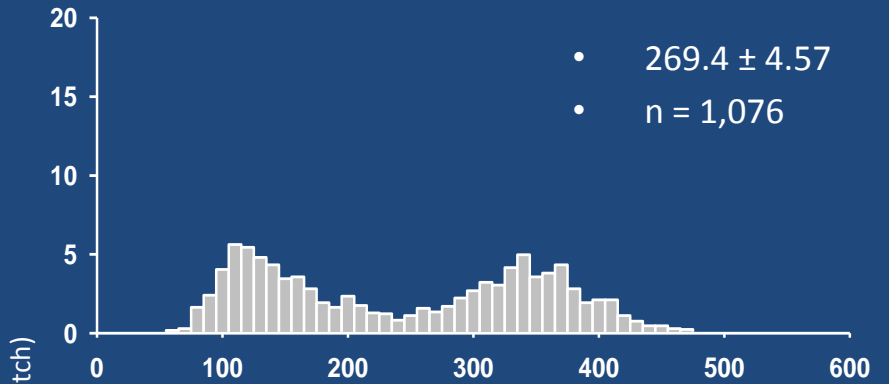
Relative abundance

- 1991-2010- 3.05 ± 0.26
- 2011- 6.98 ± 1.36

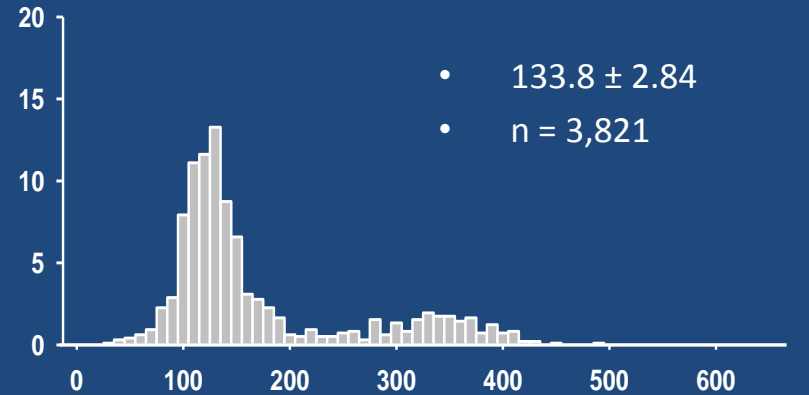
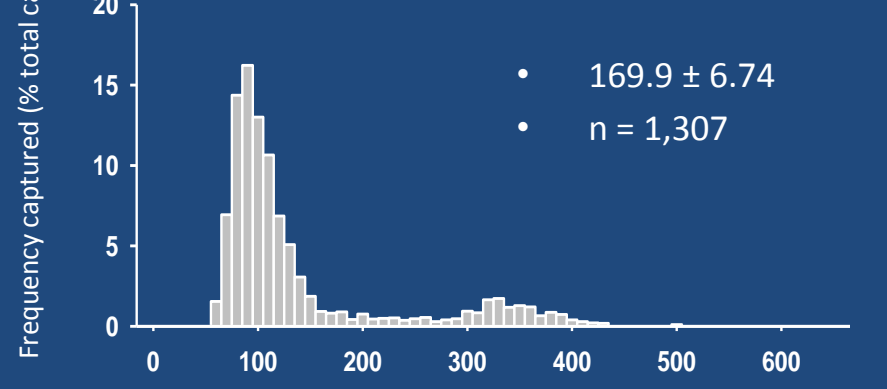
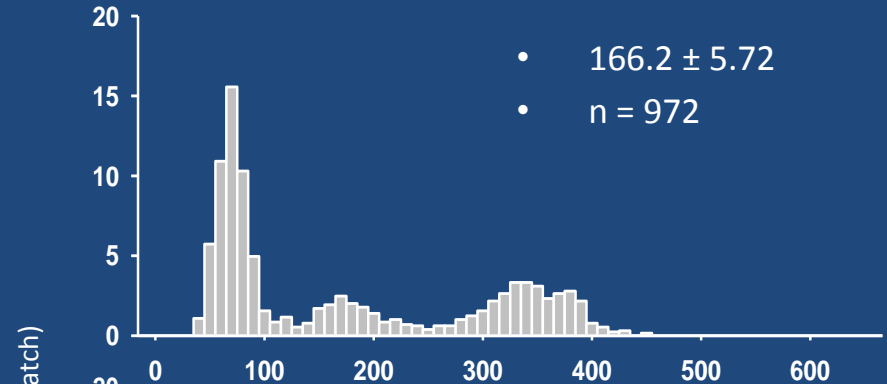


Size Structure

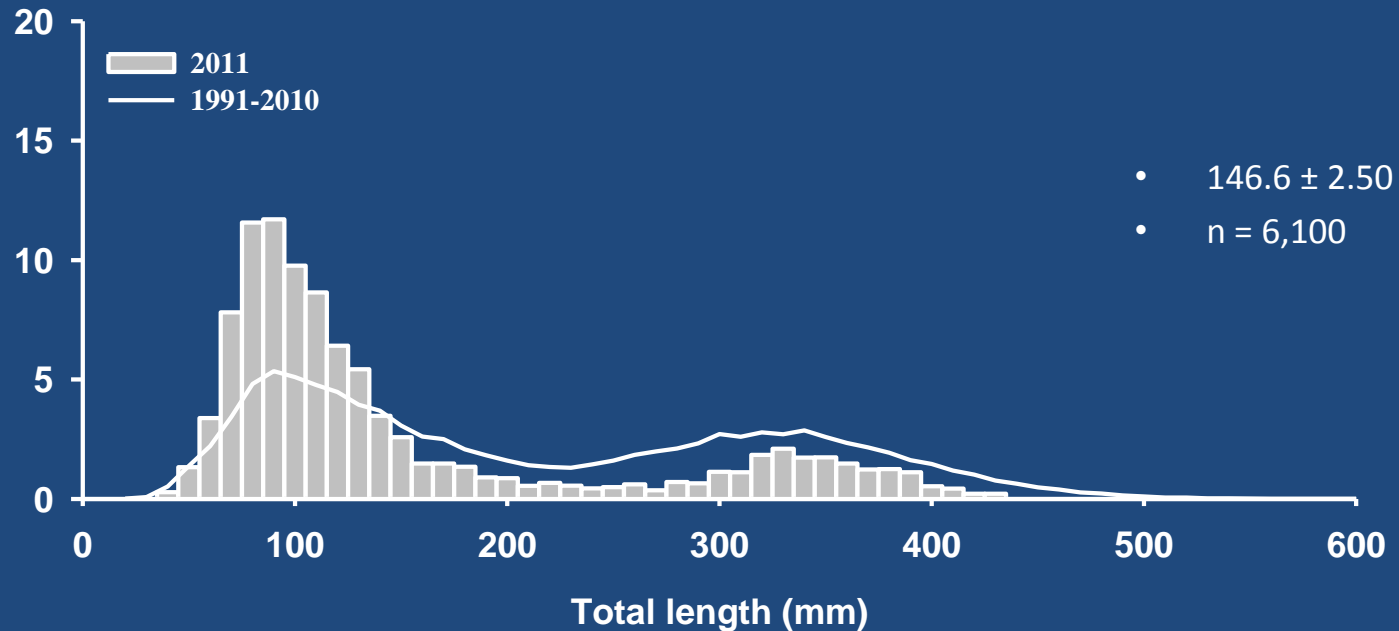
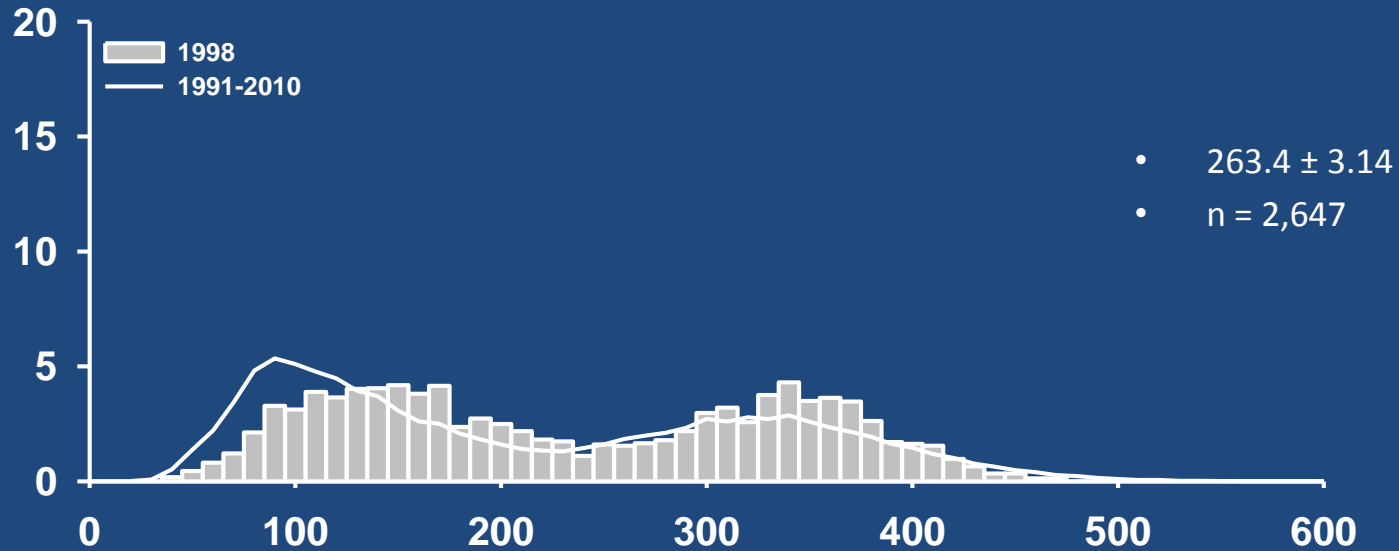
1998



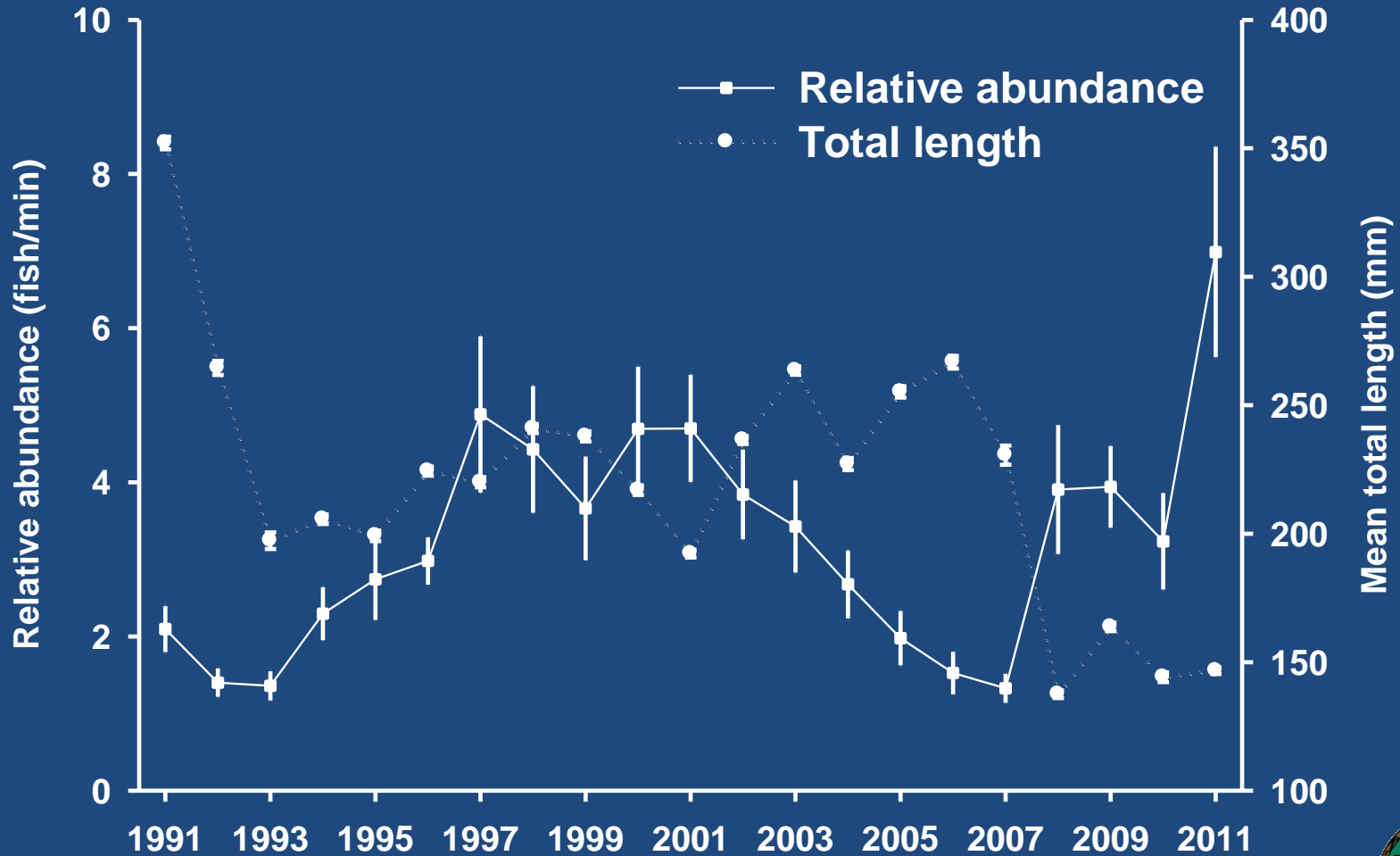
2011



Size Structure



Size Structure

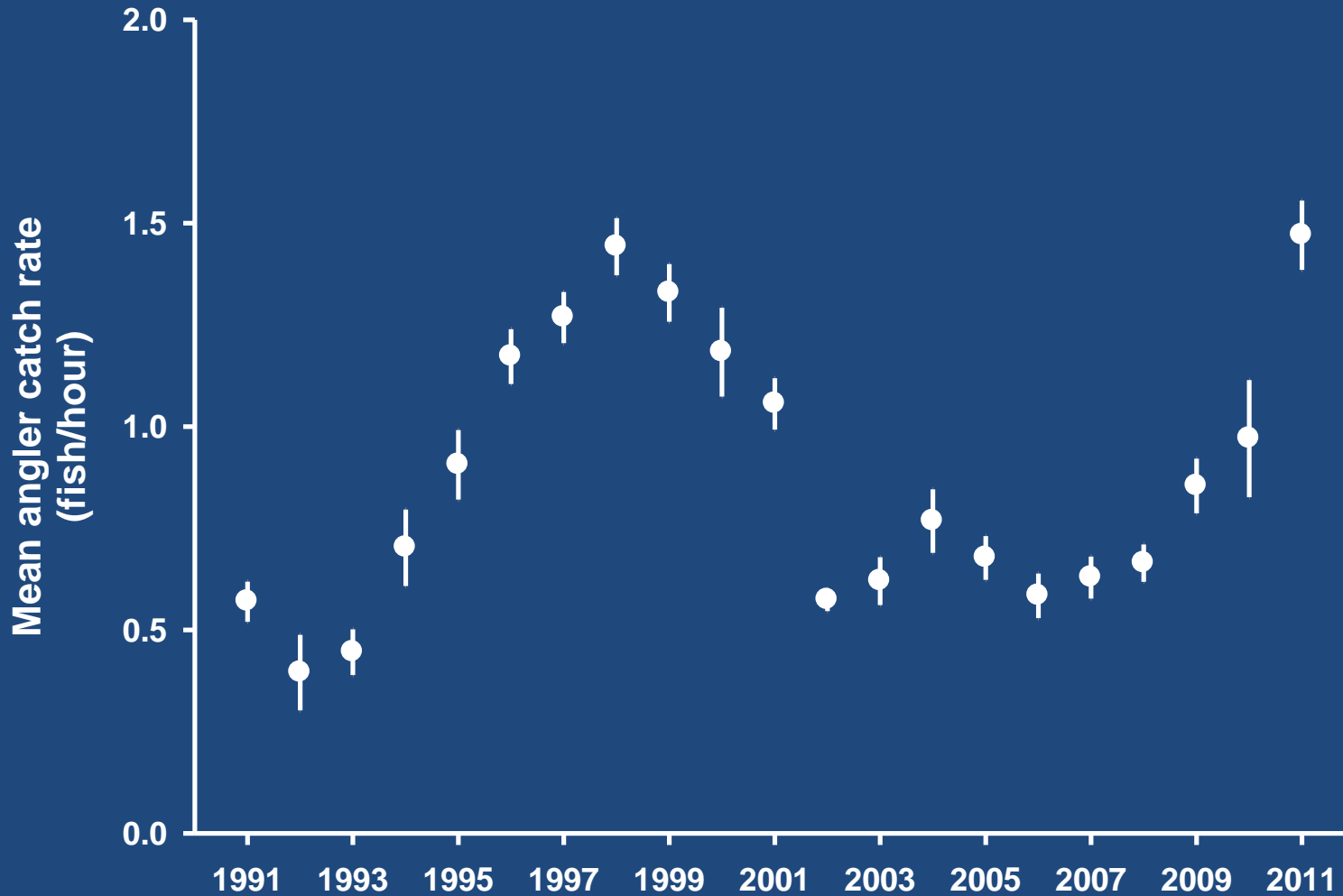


July rare non-native sampling

- Targeted specific areas to identify rare non-native fish species
 - Dam spillways
 - Slough (RKM -12.2)
 - Warm water springs
- Findings
 - Common carp
 - 63 captured - 524 ± 17.3 mm (range = 161-850 mm)
 - Walleye
 - 7 captured - 474 ± 16.7 mm (range = 390-530 mm)
 - Smallmouth bass
 - 1 captured - 311 mm



Angler catch rate



Angler effort

- Effort
 - 9,526 total angler days in 2011
 - 5,278 in the upriver fishery
 - 4,248 walk-in section of fishery
- Satisfaction
 - Overall highly satisfied with fishing experience



Conclusions

- 2011 represented the highest estimated relative abundance since project initiated in 1991
- Strong adult cohort from persisting through time following 2008 HFE
- Increased 2011 YOY survival during Equalization flow
- Long term trend of decreasing fish size
- Non-native sampling yielded few fish however important monitoring tool to identify rare species



Questions?

